



KHANI CO.

GENERAL CONTRACTOR

License No. #031999

SUBMITTAL NUMBER 3

March 8, 1993

Mr. John A. Kretzmann, P.E.
Project Engineer
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505-5472

RE: Grants Uranium Phase II, EMRD-MMD-92-5
Wyo-Ben Bentonite Submittal

*Record
Copy
3-9-93*

Dear Sir:

As I have previously indicated to you, we intend to order the Bentonite in one large bag that we will handle with the loader at each of the following Barbara J sites:

Barbara J #1 - Assuming the shaft is $4 \times 9.5 \times 1 = 38$ cu.ft. per 1 ft. of depth; therefore, $38 \times 2\frac{1}{2}$ ft. thick = 95 cu.ft. of Bentonite to create a plug $2\frac{1}{2}$ feet thick. 95 cu.ft. x 68 lbs./cu.ft. (see Spec sheet) = 6460 lbs. = 1 large bag.

Barbara J #2 - Assuming the shaft is $5 \times 9 \times 1 = 45$ cu.ft. per 1 ft. of depth; therefore, $45 \times 2\frac{1}{2}$ ft. thick = 112.50 cu.ft. of Bentonite to create a plug $2\frac{1}{2}$ ft. thick. 112.50 cu.ft. x 68 lbs./cu.ft. (see Spec sheet) = 7650 lbs. = 1 large bag. *since elliptical (33.37 cu ft/VLF) \Rightarrow 84 CF (5712#)*

Barbara J #3 - Assuming a 7' diameter shaft = 38.486 sq.ft. x 1 = 38.485 cu.ft. per 1 ft. of depth; therefore, $38.485 \times 2\frac{1}{2}$ ft. thick = 96.21 cu.ft. Use 97 x 68 lbs./cu.ft. (see Spec sheet) = 6596 lbs. = 1 large bag.

Barbara J #3a - Assuming a 30 inch diameter shaft = 5.1116 sq.ft. x 1 = 5.1116 cu.ft. per 1 ft. of depth; therefore, $5.1116 \times 2\frac{1}{2}$ ft. thick = 12.78 cu.ft. Use 13 x 68 lbs./cu.ft. (see Spec sheet) = 884 lbs. = 1 single bag.

The truck can haul up to 20 tons of Bentonite and shipping cartons from the mill per load so we intend to use all or part of one load. The total weight of the above mentioned Bentonite equals approximately 21,590 lbs. plus shipping bags. *18 bags @ 50#/bag*

I have attached a sheet from the Bentonite firm giving gallons per linear foot of bore hole which is .65 gals. per lin. ft. = 4" hole. Using Figure 14 in the Specifications, I have arrived at the following equations:

Assuming all bore holes in Poison Canyon average 8" in diameter, which appears excessive, then a 8-3/8" hole requires approximately 3.04 gals. per 1 lin.ft., or $\frac{1}{3}$ bag; therefore, I feel that 1 bag average per hole should be ample. Note that a 4" hole requires about .65 gallons per foot or 1/9 of a bag by volume. With 250 holes in Poison Canyon, that would be 250 bags x 68 lbs./bag = 17,000 lbs.

too high, expect ~150 holes (since most holes small, expect. 40 to 60 bags needed)

To recap the above figures, we estimate the following:

Barbara J #1, 2, 3, 3a = 21,590 lbs.
Poison Canyon, 250 holes = 17,000 lbs.
38,590 lbs.

$\Rightarrow 2720 - 4080 \#$
 $\Rightarrow 55 - 82 \text{ bags}$
@ 50#/bag.

13816 Winterwood Way SE • Albuquerque, New Mexico 87123 • (505) 299-1000 • Mobile 1-264-1700



KHANI CO.

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March 8, 1993

TO: J.A. Kretzmann, Mining & Minerals Division

RE: EMNRD-MMD-92-5, Submittal Number 3

Page 2

We will, therefore, order this on one truck and, with your approval, this will complete the Bentonite order and shipment.

Should you want this order changed, please advise us as soon as possible.

Thank you for your attention to this matter.

Sincerely,

L.H. Wolfe
Khani Company

JHW:rw



PRODUCT INFORMATION

KWIK-PLUG COARSE Sealing and Plugging Agent

NEN
JAK
3.9.93

Description

KWIK-PLUG COARSE is a high swelling, chemically unaltered bentonite for use in hole abandonment, sealing casing, plugging flowing holes, and isolating aquifers.

Principal Uses

Water Wells, Minerals Exploration, Monitor/Observation Wells, Disposal/Injection Wells, Blast Holes, Soils and Foundation Sealing.

Advantages

- *Gives high concentration of solids for hole abandonment and casing seals.
- *More effective seal than cement.
- *When contacted by water, forms a flexible semi-solid gel-like mass.
- *Falls through standing water.
- *More resistant to bridging than bentonite tablets.
- *Expansion fills into formation voids limiting water movement up and down the hole.
- *Prevents surface water from following bore hole down to subsurface water supplies.
- *Adds no contaminants in monitor well applications.

Treatment

Sealing Casings:

Slowly pour into annulus and allow to drop to gravel pack. To avoid bridging problems pour at a rate of 1 1/2 to 2 minutes per bag.

Hole Abandonment:

Slowly pour into hole. Take 1 1/2 to 2 minutes per bag. Fill hole to within 3-5 feet of surface and apply cement plug or fill with native soil as regulations dictate.

Seismic Shot Holes:

Slowly pour 1 1/2 to 2 minutes per bag. In wet hole conditions add enough to fill up to the static water level. In a dry hole, add 2 to 4 bags directly over charge. Where water is injected, pour 2 bags per 50 feet of hole depth.

Physical Characteristics

Bulk Density	68 lb./cu. ft.
Moisture Content	16% \pm 2
Sizing	3/8" - 3/4" ✓



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KWIK-PLUG COARSE
Sealing and Plugging Agent

**Environmental
Information**

KWIK-PLUG COARSE contains no contaminants, is non-toxic and does not ferment or spoil. Avoid creating dusty conditions.

Packaging

KWIK-PLUG COARSE is available in multiwall, water resistant 50 lb. (22.7 kg) paper bags.

Transportation

Proper Shipping Name - Not regulated
Hazard Class - Not Hazardous
Hazardous Substance - None

MATERIAL SPECIFICATION

Dry Fineness:	80% minimum passing a 200 mesh screen.
Moisture Content:	5.9%
Processed Bulk Density:	58.0 ± 4 pounds/cubic foot
pH:	5% slurry, 8 to 10.5
Specific Gravity:	10.2 pounds/gallon, when prepared according to specifications.
Slurry Solids Content:	30%, when prepared according to specifications.

E.P. TOXICITY

Typical Analysis
for

	Standard (ppm)	Set Grout (ppm)
Arsenic	5.0	<0.1
Barium	100.0	0.5
Cadmium	1.0	<0.05
Chromium	5.0	<0.1
Lead	5.0	<0.1
Mercury	0.2	<0.02
Selenium	1.0	<0.05
Silver	5.0	<0.1

TYPICAL CHEMICAL COMPOSITION
(Major Constituents)

Dry Weight %

SiO ₂	63.54
Al ₂ O ₃	19.28
Fe ₂ O ₃	3.48
TiO ₂	0.22
CaO	0.38
Na ₂ O	2.34
MgO	1.67
K ₂ O	0.10
MnO	0.02
H ₂ O	4.50
L.O.I.*	4.37

*Loss on Ignition

ENVIROPLUG GROUT has been tested by an EPA certified laboratory which issued results below detection limits on 100 volatile and semi-volatile organic pollutants.

HOLE AND ANNULAR CAPACITY

Hole Dia. (in.)	Hole Cap (GWT)	Hole Cap (Cu. Ft.)	ANNULAR CAPACITY (Gallons Per Foot)											
			Casing - Outside Dimension											
			2 3/4"	3"	4"	5"	6"	7"	8"	9"	10"	12"	14"	16"
3 1/2"	.58	.077	.32											
4"	.63	.087	.40	.15										
4 1/2"	.62	.123	.67	.42										
5"	1.32	.176	1.08	.82	.40									
5 1/2"	1.41	.188	1.15	.91	.58									
6"	1.50	.213	1.34	1.09	.78	.38								
6 1/2"	1.73	.231	1.47	1.22	.98	.69								
6 3/4"	1.86	.240	1.60	1.36	1.03	.83								
7"	2.00	.267	1.74	1.50	1.17	.77	.31							
7 1/2"	2.37	.317	2.19	1.87	1.58	1.14	.94							
8"	2.41	.349	2.30	2.11	1.79	1.38	.82							
8 1/2"	2.64	.406	2.78	2.54	2.21	1.81	1.25	.86						
9"	3.31	.442	3.06	2.81	2.46	2.07	1.51	.93						
9 1/2"	3.78	.508	3.53	3.28	2.88	2.55	1.89	1.41	.75					
10"	4.00	.546	3.83	3.58	3.26	2.86	2.29	1.71	1.04					
10 1/2"	4.61	.616	4.35	4.11	3.79	3.37	2.82	2.23	1.87	.63				
11"	4.94	.680	4.68	4.44	4.11	3.70	3.15	2.57	1.89	1.16				
12 1/2"	6.13	.819	5.87	5.63	5.30	4.89	4.33	3.73	3.08	2.34	1.41			
13 1/2"	6.63	.867	6.30	6.14	5.81	5.40	4.84	4.26	3.60	2.85	1.92			
14 1/2"	7.44	.994	7.18	6.94	6.61	6.21	5.66	5.08	4.40	3.66	2.72	.80		
15"	9.18	1.237	8.93	8.68	8.36	7.95	7.39	6.81	6.15	5.40	4.47	2.55	1.48	
15 1/2"	9.81	1.311	9.55	9.31	8.98	8.57	8.01	7.43	6.77	6.03	5.09	3.17	2.90	2.41
17 1/2"	12.93	1.729	12.60	12.36	12.03	11.62	11.07	10.49	9.83	9.07	8.14	6.22	5.36	2.41
26"	27.98	3.688	27.33	27.08	26.76	26.36	25.88	25.32	24.55	23.81	23.07	20.96	20.29	17.08

When applied as recommended, each 50# package will convert to the following gallons:

ENVIROPLUG FINE.....	105.0 Gal/Bag	ENVIROPLUG GROUT.....	17.0 Gal/Bag
ENVIROPLUG MEDIUM.....	5.0 Gal/Bag*	ENVIROPLUG NO. 8.....	6.2 Gal/Bag*
ENVIROPLUG COARSE.....	6.2 Gal/Bag*	ENVIROPLUG TABLETS.....	5.0 Gal/Bag*

*Generally applied dry.

For details on the application of ENVIROPLUG® products, see individual Product Bulletins



P.O. Box 1979 • Billings, Montana 59103 • (406) 652-6351

TOTAL P.01

RECEIVED
BLM

92 AUG 11 AM 11:40

grants II (i)
FORM APPROVED
OMB NO. 1004-0001
Expires: October 31, 1990

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
819 FARMINGTON, N.M.

**FREE USE APPLICATION AND PERMIT
VEGETATIVE OR MINERAL MATERIAL**

Permit Number
FUP-NM019-92-12

Expiration Date
08-07-94

District
Albuquerque-FRA

APPLICATION

Name of applicant
New Mexico Abandoned Mine Lands
Address (include zip code)
2040 South Pacheco, Santa Fe, NM 87505

Kind of material Fill
Estimated quantity 900 cu. yd.

Give legal land description

TOWNSHIP	RANGE	SECTION	SUBDIVISION
13N	09W	30	

State of New Mexico
County of McKinley

Materials are to be used for Reclamation of Mines

I HEREBY AGREE TO COMPLY WITH the special conditions as set forth below. I CERTIFY That the: (a) materials to be removed are to be used for the purpose noted above; (b) none of the materials removed are to be sold or bartered; (c) removal of materials can begin only upon receipt of an approved copy of this permit; and, (d) the authorized officer is to be notified upon completion of removal.

I CERTIFY That I am a citizen of the United States, and of the age of majority in the State in which I reside.

I FURTHER CERTIFY That the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief and are made in good faith.

8-7-92
(Date)

X *John A. Lukman*
(Signature of Applicant)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

PERMIT

SPECIAL CONDITIONS

This permit is hereby issued for the materials applied for but may be canceled if it appears that this permit was issued erroneously or the terms or conditions contained herein are not observed. It shall be subject to the following special conditions:

Information is collected to comply with Statutes (16 U.S.C. 604-606 and agency Regulations (43 CFR 5511.1-1(f)).

Information is used to confirm the residence of the applicant.

Applicant *must* respond to obtain a permit.

Conservation practices *must* be carried out as provided by 43 CFR 5511.1-1(b), 2-3(c), and 3-3;

Equipment, personal property, and improvements *must* be removed within ninety (90) days after expiration date 43 CFR 5511.3-5;

Any use of the surface of the lands involved in this permit shall be such as not to interfere with any mining claim subject to the provisions of Section 4 of the Act of July 23, 1955 (30 U.S.C. 613);

The permittee shall clean up all work areas and shall remove or dispose of all refuse resulting from the permittee's operations;

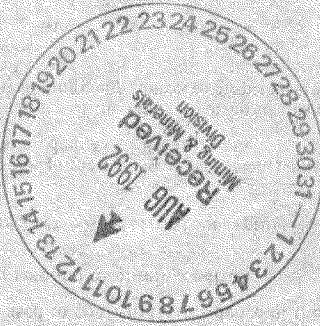
This permit is issued under the Act of July 31, 1947, as amended, and 43 U.S.C. and 1201, and under the free use privilege of the Act of May 14, 1898 (Alaska only).

An annual report indicating the amount (cu. yds. or tons) of material removed *must* be filed with the District Office on the anniversary date of the permit, or within *thirty* (30) days after permit expiration (Alaska only).

8-11-92
(Date)

Ralph Marra Acting Chief of Solids
(Signature of Authorized Officer)

APPLICANT



NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 601, 602; 43 U.S.C. 1201; 60 Stat. 367.

PRINCIPAL PURPOSE: - The information is to be used to process your application for a Free Use Permit.

ROUTINE USES:

- (1) The adjudication of the applicants' rights to the land or resources.
- (2) Documentation for public information in support of notations made on land status records for the management, disposal, and use of public lands and resources.
- (3) Transfer to appropriate Federal agencies when concurrence is required prior to granting a right in public lands or resources.
- (4) Transfer to the U.S. Department of Justice in the event of litigation involving the records or the subject matter of the records.
- (5) Transfer, in the event there is indicated a violation or potential violation of a statute, regulation, rule, order or license, whether civil, criminal or regulatory in nature, to the appropriate agency or agencies, whether Federal, State, local or foreign, charged with the responsibility of investigation or prosecuting such violation or charged with enforcing or implementing the statute, rule, regulation, order or license violated or potentially violated.

EFFECT OF NOT PROVIDING INFORMATION - If you do not furnish all the information required by this form, your application may be rejected.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et. seq.) requires us to inform you that:

Information is being collected to obtain vegetal and mineral depletion information relevant to natural resource inventory.

Information will be used for depletion records.

Response to this request is mandatory (43-5510) to fulfill the requirements for the cutting of timber and for oil and gas claimants.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03176

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 4/30/93 Weather: windy - warm

Equipment on Site: Ford 2 ton flatbed truck, 521 Case Loader

Locations Involved: Office, parking lot

Payment to Contractor by: Lump Sum

Number of Units Completed:

Contractor's Representative on Site: Khani Construction Crew

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature:

Remarks: Khani Construction Crew spent most of the day gathering materials
and cleaning all areas that had trash, old timber, steel plates, rocks and
pruning trees and shrubs that had been scared in some manner.
All heavy equipment was washed by a power steamer that the Contractor hauled
into the site. Material that was left from concrete to riprap timber and steel
was hauled to disignated areas. Oil spills were picked and hauled to an approved
site.

The Contractor will be completing final cleanup and demobilization next week,
for he has to complete other work in the area that is not related to the Bureau's
Specifications.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 90-521--06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 4/29/93 Weather: warm

Equipment on Site: 621 Case Loader, seed, straw bails, fertilizer

Locations Involved: Barbara J #1,#2,#3, #3a

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Contractor's Activity:

Spreading the specified seed source on all disturbed areas

Spreading the specified amount of fertilizer on all disturbed areas

Spreading the specified amount of mulch on all disturbed areas

Final inspection was completed on 4/29/93 by John Kretzmann, a few items

were noted as being not complete, but they will be completed as the Contractor

continues to Demobilize

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 90-521-06-03172

Project Name: GRANTS URANIUM PHASE2 SAFEGUARD MINE PROJECT

Date: 4/27/93 Weather: warm & windy

Equipment on Site: 621 Case Loader, Seed spreader, 521 Case Backhoe, TD- Dozer
fertilizer, straw bales

Locations Involved: Flea Mine, East Malpais, Beacon Hill, Beacon Hill 18-23 Mine

Payment to Contractor by: _____

Number of Units Completed: Flea Mine, East Malpais, Beacon Hill Gossett, 18-23

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: The Contractor's Activity for today included:

Furrowing with the frontend loader as specified

Spreading the specified amount of fertilizer on all disturbed areas

Spreading the specified seed source on all disturbed areas

Spreading the specified mulch on all disturbed areas

Crimping all areas that were mulched with the track dozer

DAILY CONSTRUCTION REPORT

Name of Contractor: Khanl Construction IFB #: 00-521-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 4/26/93 Weather: warm

Equipment on Site: 621 Case Loader, Fertilizer, (nitrate - phosphate), shovels,
racks, concrete

Locations Involved: Beacon Hill 18-23, Beacon Hill Gossett, Flea Mine, East
Malpais

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Activities for today Construction included:

Boring out holes on rock outcrop to install survey caps for each mine site.

Digging out 4 feet of soil material to install posts for survey caps

Furrowing disturbed access roads and mine sites to prepare for seeding and mulching.

The Contractor spent the rest of the day in cleaning trash, lumber and other debris
which had to be hauled to the nearest landfill or buried as specified.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 4/23/93 Weather: cool & windy

Equipment on Site: 621 Case Loader, compresor, drill machine, concrete
survey caps, backfill

Locations Involved: Barbara J Mine #1, #2, #3, #3a, Flea Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction worked today on backfilling with the specified
riprap, gravel material, bentonite, and backfill material from the barrow pit.
All work on plugging, backfilling and excavating exploration drill holes was
completed according to specified or at the approval of John Kretzmann approval.
All work was also approved by Bob Evetts, Bureau Chief before the Contractor was
given the final payment. All diversion channels on backfilled adit and shafts
were completed according to 0222a and later riprased on areas that erosion can
result.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 4/21/93 Weather: warm - windy

Equipment on Site: 621 Case loader, Dozer, seed, mulch, fertilizer

Locations Involved: Beacon Hill Gossett, Barbara, Barbara J #1, #2, #3, #3a
Barrow Pit

Payment to Contractor by: _____

Number of Units Completed: Beacon Hill Gossett, Barbara J Mine #1, #2, #3, #3a

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction Crew Activity included:

Spreading the specified seed source

Spreading the specified fertilizer

Spreading the specified mulch

Constructing the specified furrowing on all disturbed areas

All work was done according to the specification that were completed for
the GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 4/21/93 Weather: warm-windy

Equipment on Site: 621 Case Loader,

Locations Involved: Beacon Hill Gossett, East Malpais Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction Crew Activity included:

Contractor spent most of the day on contouring mounds on backfilled shafts and
adits. And some of the access roads were graded in areas that established roads
were present before the Contractor started the activity.

The rest of the day was spent in backfilling exploration drill holes according
to specifications and hauling backfill material to incomplete areas.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 4/20/93 Weather: warm & windy

Equipment on Site: 621 Case Loader, 521 Case Backhoe

Locations Involved: T-20 Mine, Barrow Pit, Beacon Hill Mine Gossett

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction Crew activity included.

Backfilling exploration drill holes.

Plugging exploration drill holes over 150 feet.

At approximately 11:30 am the Contractor and myself discovered two large features which included a subsidence hole with a dead calf in it that measured 7'w x 9'l x 10'd and the shaft measured 10'w x 12'l x 70'd. At this time I felt that both features were a danger to the public and to animals so I called the office and talked to John Kretzmann and tried to contact Bob Evetts whom was not at the office. I mentioned to John that we should backfill both sites with the reason that it should

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #:)) %0!)#)#1&0

Project Name: GRANTS URANIUM PHASE 2 SAFEGUARD PROJECT

Date: 4/19/93 Weather: cool & windy

Equipment on Site: Measuring tape

Locations Involved: Poison Canyon,

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction Crew took the day off, so I called the office
and recieved an approval to go ahead and backfill or plug one hundred and
fifty exploration drill holes. I spent most of the day finding exploration
drill holes and measuring them, most of the holes were under 50 ft therefore
we might go with more then 150 exploration holes depending on cost per hole.
The rest of the day was spent on reconasaince of the Marcus Mine, which is
a Uranium Mine near the Pioson Canyon area.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 SAFEGUARD PROJECT

Date: 4/16/93 Weather: cool & windy

Equipment on Site: 621 Case Loader, 580 Case Backhoe, End-dump truck 30yd (2)

Locations Involved: Barbara J- Mine #2, #3, #3a

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction Crew spent a couple of hours on maintenance of
all equipment. During this time I drove to the nearest phone and called the
office to inform the project engineer and the bureau chief on all activity.
I talked to John Kretzmann about some of the shafts calapsing and not receiving
the required cubic yards of riprap, therefore I will have to modify some of
total volumes. Before 2:00 p.m. I had to stop the haul trucks from bringing in
riprap until the rock is pushed in the shaft in each shaft. All the riprap has
been very durable and large enough to break any kind of bridging on mine openings.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHAN CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 SAFEGUARD PROJECT

Date: 4/15/93 Weather: cool & sunny

Equipment on Site: 621 Case Loader, End-dump trucks 30yd

Locations Involved: Barbara J-Mines #1.#2.#3.#3a

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: ~~Khani Construction~~ Crew began work on the Barbara J Mines, most of the work consisted of backfilling with riprap which had been hauled from McCarth's Pit just east of Grants, New Mexico. The specified gravel material was hauled and weighed at a nearby gravel pit, a couple more ft of gravel was dumped in each shaft to compensate for some of the material falling in from the sides of the shafts. The shafts that were required to get 2' to 3' of Bentonite all recieved the required amount exempt for the Barbara J-2 Mine which calapsed before it recieved bentonite. While backfilling Barbara J-3a Mine, water continued coming up with the riprap, there, fore I called John Kretzmann and asked to go with more riprap since dirt was going to be lost while water was still present, he gave us the ok to use a bit more rock which worked just fine.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 SAFEGUARD MINE PROJECT

Date: 4/13/93 Weather: cool & windy

Equipment on Site: 621 Case loader

Locations Involved: Barbara J-Mines #1,#2,#3

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Construction activity for the day included:

Hauling the specified riprap to each shaft

Loader operator pushed in excess riprap into shafts

At approximately 1:00 P.M. the Barbara J 1 Mine calapsed which was approximately backfilled to 90ft. Since the south side of the shaft calapsed with concrete collar it was impossible to pour in the bentonite as specified and by focusing on the danger of the shaft opening more and being near the road I thought the safest thing was to continue backfilling before the evening was over. Jerry White from OSM was present at the site with Randal Armijo whom verified the cave in of the shaft.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE2 SAFEGUARD PROJECT

Date: 4/4/93 Weather: cool & clear

Equipment on Site: 621 Case Loader

Locations Involved: Barbara J Mine #1, #2.

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction only had one other labor working today. Most of the morning was spent waiting for the rock. During this time all equipment was checked and lubed.

I mentioned to the Contractor on this morning that we at AML office would have to have the testing result before any riprap was dumped in any of the open mines. The Contractor showed me some test results that were from the riprap and a FAX was sent to the office identifying that all material was tested and passed all requirements according to specifications. The rest of the day was spent in dumping riprap into Barbara J #1, #2 mine.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 SAFEGUARD PROJECT

Date: 4/3/93 Weather: cool - clear

Equipment on Site: 621 Case Loader, 30 ton Enddump Trucks

safety harness, safety ropes, shovels, picks,

Locations Involved: Barbara J- Mine 3, 3a

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction activity included:

Trucks hauled the specified riprap from McCarthy's open pit which is east of
Grants, each loads contains durable rock material containing approximately
20tons to 25 tons per load.

John Kretzmann showed up at the site at approximately 2:30 p.m. to discuss the
activity and look over the areas that had been backfilled, a couple of places
were noted to require additional work before the seeding took place.

Towards the evening the Barbara J#3-a Mine was plugged with rock material, which
took the Contractor half a day to unplug, after this smaller rock was dumped into
the shaft.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-21-06-03172

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 4/2/93 Weather: windy & cool

Equipment on Site: 580 Case Dozer, 621 Case Loader

Locations Involved: Flea Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: Khani Construction Crew

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: The Contractor's activity included final contouring of the Flea Mine
backfill pile and the waste pile where the Contractor was barrowing material.
The Contractor only had a couple of employees working on this day therefore only
a couple of sites were worked on. All debris was hauled to the appropriate
locations to be buried with 5ft of dirt material or buried inside the adits.
All work to date has been completed according specification, for further detail
refer to specifications or modifications included in final report.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-21-06-03172

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 4/1/93 Weather: warm

Equipment on Site: 621 Case Loader, 601 Basic Grader, shovels, picks,

Locations Involved: Geacon Hill Mine, Beacon Hill 18-23 Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymone Rodarte

Contractors Representative's Signature: _____

Remarks: ~~The Contractor's activity for today included working at both Deacon Hill Mines. most of the work was final contouring, grading and cleaning the sites. Several exploration holes were measured and a few subsidence holes were foun which had not been seen before. Some of the larger subsidence holes will be included on the daily log of exploration holes for deeper holes, which has been approved by office Engineers. At 1:00 p.m. I spoke to Sonny Marquez whom is the Rancher about the updated ROE that he had mentioned to give me before the project started and he stated that he forgot and that he would hand it to~~

me as soon as possible. He also stated that the Contractor had his approval to use the parking area to his disgratopn.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 3/31/93 Weather: Sunny and Cool

Equipment on Site: 580 Case Backhoe, 621 Case Loader

Locations Involved: East Malpais, Flea Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: The Contractor continued installing the PVC covering on the Flea Mine and East Malpais. All work was completed according to specifications. A list of the requirements will follow on the final report. Topsoil for the Flea Mine and East Malpais was borrowed from a waste pile area that contained suitable topsoil. A few deficiencies were noted but were corrected before the day was over.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 3/30/93 Weather: Cloudy and Muddy

Equipment on Site: None

Locations Involved: No work. Bad Weather.

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: The Contractor did not show up because of bad weather.

I drove to the project site in the morning to inform the laborers that weather conditions prohibited work.

From 1:30 to 3:30 I recovered some of the Marcus Mine.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 3/29/93 Weather: Snowy and Cold

Equipment on Site: Grader

Locations Involved: Beacon Hill Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: The Contractor moved small grader to Beacon Hill Mine.
left project site at 10:00 am. No work was done because of snow and rain. I drove to Gallup to
Finalize the maintenance work, the Maintenance work was completed. John Eichmann had backfilled
three subsidence features that were related to the 1980 AML work done on the east side of Gallup near
highway 602.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 3/22/73 Weather: Cool and Cloudy

Equipment on Site: 520 Loader, 621 Cat⁶⁴ Loader

Locations Involved: Barbara J #1 and 2 Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: The Contractor worked throughout the day on backfilling exploration drill holes. Some holes had to be rejected because they plugged before being backfilled completely, while others needed proper removal of vent pipes. Several exploration drill holes and vent holes will need to be backfilled with additional material because they have opened wider. At approximately 5:15 I left to Gallup to inspect a maintenance project at Mr. Williams property. I returned to Grants at 9:30 p.m..

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 3/26/93 Weather: Cloudy and Cold

Equipment on Site: 621 Cat Loader

Locations Involved: Barbara J # 3-34, Gossett Mine, East Malpais, Flea Mine, 18-23 Mine Hill Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: Starting off the morning I worked each mine feature that will be covered with the PVC liner followed by one foot of topsoil. I checked the installation of PVC which met all requirement according to specs. Several vent shafts were lined with metal casing which took several hours to pull the casing out. Melvin Marcus whom is the leasee on Section 20 showed me an additional subsidence hole which had not been noted before.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 3/23/93 Weather: Warmer

Equipment on Site: Shovels, Wheelbarrow, 621 Case Loader

Locations Involved: East Malpais, Barbara J 3 Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: Khani Construction

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: The Contractor started filling drill holes at East Malpais at 8:30, at 11:00 I stopped all activity and sent the Contractor to Poison Canyon Mine. I called the office and Consulted with John Kretzmann at the office for we had reached 600 exploration drill holes. I stopped backfilling holes until we have averaged all the holes and total of funding that has been appropriated hole to be funded to before proceeding. A total of 114 exploration drill holes were backfilled today.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction **IFB #:** 00-521-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 3/22/93 **Weather:** Warm and Clear

Equipment on Site: 580 Case Backhoe, 612 Case Loader

Locations Involved: Flea Mine, Beacon Hill Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: The Contractor started work this morning at Beacon Hill Mine on backfilling both 36" vent shafts which were completed at 11:30 am. Most of the Construction continued in backfilling exploration drill holes around the Flea Mine area. At approximately 4:15 the Contractor had backfilled 157 exploration drill holes. There was a total of 7 exploration holes that were over 12" diameter and deeper than 15 feet that were plugged according to specifications.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-21-06-03172

Project Name: GRANTS URANIUM PHASE 2 SAFEGUARD MINE PROJECT

Date: 3/19/93 Weather: warm

Equipment on Site: 580 Case Backhoe, 621 Case Loader

Locations Involved: Beacon Hill Mine Gossett, Beacon Hill 18-23 Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: The Contractor started work at 7:45 a.m. at the 18-23 Mine, most
of the work consisted of clearing up all the timber which was bridged at the
entrance of the adit, labor's were strapped with safety ropes and harnesses
and slowly lowered into the incline shaft to bring out all timber that could
be taken out before backfilling with riprap. A total of 9 bucket loads of riprap
were dumped into the incline adits which broke all left over timber inside the
adit. Throught the day the Contractor continued to backfill the incline adit
which took a total of 88 bucket loads, 3yds per bucket. The rest of the crew
continued in backfilling and plugging exploration drill holes that had been 1
marked and documented on the daily log of backfilled or plugged holes.

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-21-06-03172

Project Name: Grants Uranium Phase 2 Mine Safeguard Project

Date: 3/18/93 Weather: cloudy & cool

Equipment on Site: 580 Case Backhoe, 621 Case Frontend Loader

Locations Involved: East Malpais

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction started work at the East Malpais Mine this morning
while I drove to the Barbara J Mines to check if the Sub-Contractor had finished
the demolition of the headframes. The Sub-Contractor had completed demolition
and was moving his torches to the 18-23 Beacon Hill Mine. After lunch I was
able to contact the Rancher and stated to him that the steel headframe was ready
to be hauled away. I also called the office and let Bob Eyetts and John Kretzmann
about the activity. The Contractor kept on backfilling the East Malpais Mine
which included 15 to 20 feet of riprap and backfilling of waste material PVC
liner and topsoil. All work was completed according to specs, for more detailed
information refer to specifications and modifications that have been approved.

Back:

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03721

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 3/16/93 Weather: windy & cool

Equipment on Site: TD-25 Dozer, Cutting torches, excavator, 580 Case Backhoe

Locations Involved: Flea Mine North & South, Barbara J #1, #2 Mine, Beacon Hill Gossett Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: Khani Construction started work at the Flea Mines and Barbara J-Mines
most of the day was spent in excavating debris from entrances of both adits,
cutting wire mesh and piling all timber to be covered with the required 5 feet
of soil material. At the Beacon Hill Gossett all timber that made up the load
out was dismantled and buried in a large pit as specified by the Bureau.
The Rancher had asked for the timber, but after consulting the office it was
safer to bury the timber since it had been effected by high grade ore.
During the day I checked with the Sub-Contractor on the demolition of the head-
frame and on directing the Contractor's Crew on all work. For more information
or specifics on work refer to the specifications.

DAILY CONSTRUCTION REPORT

Name of Contractor: Khani Construction IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 3/15/93 Weather: cloudy & windy

Equipment on Site: TD-INTERNATIONAL DOZER, 621 CASE LOADER

Locations Involved: PARKING AREA, ACCESS ROADS

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: RAYMOND RODARTE

Contractors Representative's Signature: _____

Remarks: ~~Khani Construction Crew worked on grading all roads that will be used during construction. The contractor hauled in the office trailer, diesel truck and a storage truck. Most of the morning was spent in grading the parking lot and leveling the office trailer, later the project sign was erected near the entrance road. Later a diesel tank was hauled and placed near the office while Jim Wolf whom will be the Foreman showed me the respirators, safety glass boots, safety harness, safety rope and fire extinguishers and FIRST AID KITS that he had purchased to be used during the project. I spent the rest of the day in taking test with the ESP-1 portable, most of the reading being Under +01 ur/H. Before the day was over the Contractor showed me the TLD badges that will be issued to each employee with a set of coveralls to be used during the project and left at the office. Also at the end of the day respirator, TLD badge will be sacked in a zip-lock bag and left on site.~~

DAILY CONSTRUCTION REPORT

Name of Contractor: KHANI CONSTRUCTION IFB #: 00-521-06-03172

Project Name: GRANTS URANIUM PHASE 2 MINE SAFEGUARD PROJECT

Date: 3/11/93 Weather: windy & cold

Equipment on Site: 580 Case Backhoe concrete mix, bentonite sacks
exploration drill hole plug sacks

Locations Involved: Beacon Hill 18-23 Mine, East Malpais, Barbara J-#1, #2 Mine

Payment to Contractor by: _____

Number of Units Completed: _____

Contractor's Representative on Site: _____

AML Representative's Signature: Raymond Rodarte

Contractors Representative's Signature: _____

Remarks: ~~Khani Construction Crew began work this morning at the 18-23 Beacon Hill Mine. All timber was removed from the entrance of the mine, the Crew used all pre-cautioned measures in working in and around the adit. Each employee used a respirator when directed, safety ropes and harness and coveralls. John Kretzmann and John Guranich showed up at the site to measure waste piles and look over the activity at about noon. The Contractor started backfilling exploration drill holes that were marked and measured and that will be documented on a daily log thru out the project. Demolition of the headframe at the Barbara J Mines continued and should be completed before the week is over. The Rancher and Contractor talked with the Sub-Contractor on what size the pieces of steel should be cut too.~~

**FAX COVER SHEET**

2806 West Main Street
Farmington, New Mexico 87401
Tel. (505) 328-4737

INTER-MOUNTAIN LABORATORIES, Inc.**Soil, Water, Metals, Organics****FAX (505) 325-4182**Company: Khaki Co.Attention: Jim WolfeFax #: 877-8349This transmission consists of this cover sheet plus 1 other pages.

Message:

This is passing all requirements
for the chemical analysis.

I will call you on Monday with
the Radium results.

Report is one page and follows
this cover sheet.

David Spencer
4-7-93

APR 7, 1993 4:10PM P.02



Inter-Mountain Laboratories, Inc.
Farmington, New Mexico 87401

2506 West Main Street

Tel. (505) 326-4737

KHAN CO.
ALBUQUERQUE, NEW MEXICO
NAME: GRANTS URANIUM PHASE II
LOCATION: GRANTS, NEW MEXICO

Page 1 of 1

ATE SAMPLED: April 2, 1993
ATE REPORTED: April 7, 1993

5058778349

26979

TO:

FROM: IML-FARMINGTON, NM

Reviewed by:

David Spence
Soil Lab Director

Abbreviations : PE, Paste Extract; NA, Not available at this time.

SAMPLE IDENTIFICATION	pH, PE	Total Dissolved Solids, mg/l	Dissolved Arsenic, PE	Dissolved Chromium, PE	Dissolved Lead, PE	Dissolved Selenium, PE	Dissolved Vanadium, PE	Radium 226 pCi/l	Radium 228 pCi/l
RIP RAP-McCURDY PIT, FOREST RD 400	7.0	233	<0.005	<0.02	<0.02	0.005	<0.01	NA	NA

Preliminary Quantity Takeoff

JAK

5.5-92

Barbara J #1: Shaft

$$(4' \times 9.4' \times 300' (?) D) \frac{1.15}{27} = 480 \text{ cy} = \text{Vol. Internal.}$$

$$\text{Vol. ext.} = \frac{[(4)(9.4) + (22)(27.4) + 4(13)(18.4)] \cdot 1.15}{2(27)} = 11.3 \text{ ay}$$

$$V_{TOT} = \underline{492 \text{ cy}} \quad \text{use } \boxed{490 \text{ cy}}$$

137C4/FH

Barbara J#2: Shaft

5' x 8.5' ellipse

$$(33.3690 \text{ ft}^2)(460') \frac{1.15}{2} = 654 \text{ cy} = V_{\text{int.}}$$

$$\text{Vert.} = \frac{[(5)(25) + (23)(26.5) + 4(14)(17.5)] \frac{1.15}{6(27)}}{1.2409}$$

$$V_{TOT.} = \underline{665 \text{ cu}} \quad \text{use } \underline{665 \text{ cu}}$$

1.2404/K4

Barbours J # 3: 7' ϕ x 435' deep

$$V_{int.} = \frac{\pi (7)^2}{4} (435) \left(\frac{115}{27} \right) = 713 \text{ cu}$$

1.43 cy/ft

$$V_{\text{ext}} = \left[\frac{\pi (7^2)}{4} + \frac{\pi (25)^2}{4} + \frac{4\pi (16)^2}{4} \right] \frac{1.15}{6(27)} = 9.5$$

$V_{TOT} = 722 \text{ cy}$ use 720 cy

Barbara J# 3-A:

3' ϕ x 300' D (BURN)

$$V_{int.} = \frac{\pi (3)^2}{4} \left(\frac{35}{300} \right) \frac{1.15}{27} = 90.3 \text{ cm}^3$$

0.26
41/F

$$V_{ext.} = \left[\frac{\pi (3^2)}{4} + \frac{\pi (2.5^2)}{4} + \frac{\pi (4^2)}{4} \right] \frac{1.15}{6(27)} = 4.$$

$$V_{TOT.} = 95 \text{ ay}$$

use 95 cu

Subtotal This Pg.

1970 CM

100' H.W.
4320
150
600

Grants II
Preliminary Quantity Takeoff

JAK

5-5-92

Barbara J #1: Shaft

$$(4' \times 9.4' \times 300' (?) D) \frac{1.15}{27} = 480 \text{ cy} = \text{Vol. Internal.}$$

$$\text{Vol. ext.} = [(4)(9.4) + (22)(27.4) + 4(13)(18.4)] \frac{1.15}{6(27)}$$

$$= 11.3 \text{ cy}$$

$$V_{TOT} = \underline{492 \text{ cy}} \quad \text{use } \boxed{490 \text{ cy}}$$

18 cy/hr

Barbara J #2: Shaft 5' x 8.5' ellipse

$$(33.3090 \text{ ft}^2)(460') \frac{1.15}{27} = 654 \text{ cy} = V_{int.}$$

$$\text{Vext.} = [(5)(8.5) + (23)(26.5) + 4(14)(17.5)] \frac{1.15}{6(27)}$$

$$= 11.6 \text{ cy}$$

$$V_{TOT.} = \underline{665 \text{ cy}} \quad \text{use } \boxed{665 \text{ cy}}$$

1.24 cy/hr

Barbara J #3: 7' ϕ x 435' deep

$$V_{int.} = \frac{\pi(7^2)}{4} (435) \left(\frac{1.15}{27}\right) = 713 \text{ cy}$$

1.43 cy/hr

$$\text{Vext.} = \left[\frac{\pi(7^2)}{4} + \frac{\pi(25^2)}{4} + \frac{4\pi(16^2)}{4} \right] \frac{1.15}{6(27)} = 9.5 \text{ cy}$$

$$V_{TOT} = \underline{722 \text{ cy}} \quad \text{use } \boxed{720 \text{ cy}}$$

Barbara J #3-A: 3' ϕ x 300' D (Bum)

$$V_{int.} = \frac{\pi(3^2)}{4} (300) \frac{1.15}{27} = 90.3 \text{ cy}$$

0.26
91 hr

$$\text{Vext.} = \left[\frac{\pi(3^2)}{4} + \frac{\pi(21^2)}{4} + \frac{4\pi(9^2)}{4} \right] \frac{1.15}{6(27)} = 4.5 \text{ cy}$$

$$V_{TOT.} = \underline{95 \text{ cy}} \quad \text{use } \boxed{95 \text{ cy}}$$

Grants II (con't.)

JAK

5-5-92

Flex Mine: need angles of declination of adits
~~North Adit:~~

$$V_{int.} = \cancel{[(13)(8)(15)]} + \underline{\hspace{2cm}}$$

East Malpais lease:

Graft: 7' x 6' x 120' D

$$V_{int.} = (7)(6)(120)\left(\frac{1.15}{27}\right) = 215 \text{ cy}$$

$$V_{ext.} = [7(6) + 25(24) + 4(16)(15)] \frac{1.15}{6(27)} = 11.4 \text{ cy}$$

$$V_{TOT} = 226 \text{ cy} \quad \text{use } \boxed{225 \text{ cy}}$$

$$\text{Riprap: } (7)(6)(10') \frac{1.15}{27} = 18 \text{ cy}$$

For decline adits: need \angle of declination

width of trench in front of adits

Grants II (cont)

JAK

7-12-92

Flea Mine

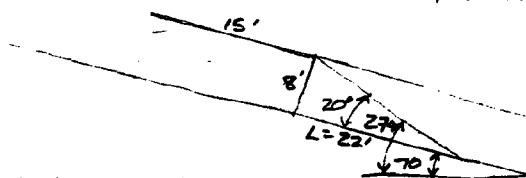
North Adit : declined at 7°

13'W x 8'H

Angle of repose - use 27°

Trench: 22'H x 65'L x 13'W

$$L = \frac{8'}{\tan 20^\circ} = 22'$$



$$V_{int.} = \left[\frac{(15)(13)(8) + (8)(22)(13)}{2} \right] \frac{1.15}{27} = 115.2 \text{ cy}$$

$$V_{ext.} = \frac{(22)(65)(13)(1.15)}{2(27)} = 395.9 \text{ cy}$$

$$V_{TOT.} = 511 \text{ cy use } \boxed{510 \text{ cy}}$$

South Adit: declined @ $20^\circ 30'$

7.7'W x 6.3'H

$$L = \frac{6.3}{\tan(27^\circ - 20^\circ 30')} = 144'$$

$$V_{int.} = \left[\frac{(7.7)(6.3)(15) + (6.3)(144)(7.7)}{2} \right] \frac{1.15}{27} = 179.8 \text{ cy}$$

$$V_{ext.} = \text{Assume } \sim 15 \text{ cy}$$

$$V_{TOT.} = 195 \text{ cy use } \boxed{195 \text{ cy}}$$

Beacon Hill #18-23

7' x 8.5' @ 40° declination

if block at $\pm 60'$ holes:

17' x 22' at surface

$$V_{int.} = \frac{(7)(8.5)(60)(1.15)}{27} = 152.1 \text{ cy}$$

$$V_{ext.} = \left[\frac{(17)(22) + (35)(40) + 4(26)(31)}{6(27)} \right] \frac{1.15}{27} = 35.5 \text{ cy}$$

Grants II (cont.)

JAK
7-14-92

Beacon Hill Garrett: declined @ 170-200

Adit 9'W x 8'H

14'H x 20'L x 15'W Trench

mine whole L of

repose ≈ 360

use 30°

$$L = \frac{8}{\tan(30^\circ - 20^\circ)} = 45'$$

$$V_{int.} = \left[(9)(8)(15) + \frac{8(45)(9)}{2} \right] \frac{1.15}{27} = 115.0 \text{ cy}$$

$$V_{ext.} = \frac{(14)(20)(15)}{2} \frac{1.15}{(27)} = 89.4 \text{ cy}$$

$$V_{TOT} = 204.4 \text{ cy}$$

use 205 cy

East vent 3' ϕ x 87'D

$$V_{int.} = \frac{\pi(3)^2}{4} (87) \frac{1.15}{27} = 26.2 \text{ cy}$$

$$V_{ext.} = \left[\frac{\pi(3)^2}{4} + \frac{\pi(2)^2}{4} + \frac{4\pi(12)^2}{4} \right] \frac{1.15}{6(27)} = 5.7 \text{ cy}$$

$$V_{TOT.} = 31.9 \text{ cy}$$

West vent same size / depth

$$V_{TOT} = (31.9)2 = 63.8 \text{ cy}$$

use 65 cy

Grants II

Compacted Impervious Material @ Shafts + Adits

JAK

7-14-92

Barbara J #1

$$V = \frac{(4)(94)(3)(1.15)}{27} = 37.48 \text{ cy}$$

Barbara J #2

$$V = \frac{(33.36)(94)(3)(1.15)}{27} = 4.3 \text{ cy}$$

Barbara J #3

$$V = \frac{\pi(7)^2}{4} (3) \frac{1.15}{27} = 4.9 \text{ cy}$$

Barbara J #3A

$$V = \frac{\pi(2.5)^2}{4} (3) \frac{1.15}{27} = 0.6 \text{ cy}$$

14.6 cy Poison Canyon

use 15 cy

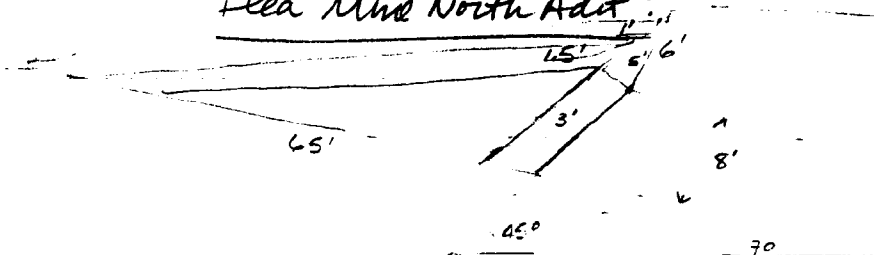
East Malpais Lease

$$V = \frac{(7)(6)(3)(1.15)}{27} = 5.4 \text{ cy}$$

Beacon Hill # 18-23

$$V = \frac{(17)(22)(3)(1.15)}{27} = 47.8 \text{ cy}$$

Flea Mine North Adit:



$$V = \left[\frac{8}{27} (3)(13) + 65(1.5)(13) + \frac{(3)(5)}{2} (13) \right] \frac{1.15}{27} = 76.9 \text{ cy}$$

Grants II
Compacted Impervious Mtl.

JAK
7-14-92

Flea Mine South Adit

$$\frac{6.3}{\cancel{150}} (3) \left(\frac{15}{\cancel{7.7}} \right) \frac{1.15}{27} = \cancel{8.8} \text{ cy}$$

Beacon Hill Gossett Adit

$$V = \left[\frac{8}{\sin 45} (3)(15) + 20(15)(5) + \left(\frac{3 \times 5}{2} \right) (15) \right] \frac{1.15}{27} = 45.6 \text{ cy}$$

East & West Vents

$$\frac{\pi (3)^2}{4} (3) \frac{1.15}{27} = 0.9 \text{ cy}$$

193.7 cy Mesa
Montezuma

use 200 cy

Special backfill of Barbours mines, assume filling rock to 150' below ground

#1: Rock $(4')(9.4')(150) \frac{1.15}{27} = 240cy @ \$50 = \$12,000$
 Bentonite $(4')(9.4')(1') \frac{1}{27} = 1.39cy @ \$500 = 697$
 Conc. $(4')(9.4')(4') \frac{1}{27} = 5.57cy @ \$150 = 885$
 Mine Waste: $(4')(9.4')(145) \frac{1.15}{27} = 232cy @ \$8 = 1,900$
 Remove timber lagging @ 150' depth LS $\frac{1,500}{\$16,935}$

#2: $33.3690 ft^2 = 1.236cy/ft \times 1.15 = 1.42cy/ft.$ 460' D.
 Rock: $(1.42)(310) = 440cy @ \$50 = \$22,000.$
 Bentonite: $(1.42cy @ \$500) = 710$
 Conc. $(1.42)(5) = 7.10cy @ \$150 = 1065$
 Mine Waste $(1.42)(144') = 204cy @ \$8 = 1630$
 Remove timber lagging @ 150' depth = 1500
 $\$26,905$

#3: $7' \phi \times 455' D$ $38.48 ft^2 = 1.43cy/ft \times 1.15 = 1.64cy/ft.$
 Rock: $(1.64)(285) = 467cy @ \$50 = \$23,370.$
 Bentonite: $1.64cy @ \$500 = 820.$
 Conc. $(1.64)(7) = 11.48cy @ \$150 = 1725.$
 Mine Waste $(1.64)(142') = 233cy @ \$8 = 1865.$
 Remove steel lining @ 150' depth = 1500
 $\$29,280$

#3A $3' \phi \times 300' (?) D.$ $7.075 ft^2 = 0.26cy/ft \times 1.15 = 0.30cy/ft.$
 Rock $(0.30)(150) = 45cy @ \$50 = \$2,250$
 Bentonite: $0.30 @ \$500 = 150$
 Conc. $0.30(3) = 0.9cy @ \$150 = 585$
 Mine Waste: $(0.30)(146') = 44cy @ \$8 = 350$
 Remove steel lining @ 150' depth = 1250
 $\$4585$

?

Total Special Backfill
Conc. Caps =

\$ 77,700
\$ 22,905

use \$ 78,000

use 23,000

$\Delta = \$55,000$

to store 713 cu yard waste mass.
= \$77/aj

C-1-P Conc. Cap at Barbara J Mines (assume 8'-12' cover)

#1: ^{Provided on cap, collar at ground level}
 Top: $(4+0.5+4)(9.4+0.5+4)(\frac{7}{12}) = 69 \text{ CF}$ Side A.

Footing: $2(13.9')(2')(\frac{11}{12}) + 2(4)(2)(\frac{11}{12}) = 66 \text{ CF}$

$\frac{135 \text{ CF}}{27} = 5.0 \text{ CY}$
 $5.0 \text{ CY} @ \$250 = \1250

Excavation. (none)

Formwork $38 \text{ SF} @ \$5.50 = 210$

Foot Footing Formwork 50

2" PVC Drains $3(1.083') = 3.25' @ \$4 = 13$

Formwork Support Beams \rightarrow

$2(8) = 16 \text{ LF} \times \$25 = 400$

Finishing + curing $120 \times 0.10 = 12$

$\$1935$

$(\Delta = \$4,995 = \$65/\text{CY mine waste stored})$

#2: Assume 8'-12' cover

Conc.: top $(9.5')(13')(\frac{8}{12}) = 82 \text{ CF}$ Side B

Fig: $(9.5')(13)(\frac{11}{12}) - 33.37 = 80 \text{ CF}$

$\frac{162 \text{ CF}}{27} = 6.0 \text{ CY}$

$@ \$250 = \1500

EXCV: $\left[\frac{(4)(49) + 4(27.3)(31) + (9.5)(13)(12) - (33.37)(12)}{27} \right] = \frac{11,526}{27} = 412 \text{ CY}$

$\frac{(\$412)(10)}{(\$16)(20)} = 4120$

Formwork: $34 \text{ SF} @ \$5.50 = \190

Footing Formwork 50

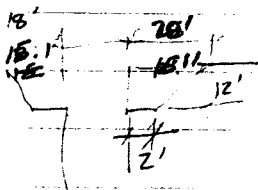
Misc. 125

Support Beams: $2(9.5') = 19' @ \$25 = 475$

Backfill above Cap: $\frac{412}{27} @ \$5 = 760$

$\Delta = \$2,145 = \$119/\text{CY mine waste}$

$\$18,085 = \$22/\text{CY mine waste}$



#3

assume 8' - 12' cover

hole

7' ϕ \Rightarrow 11' ϕ cap

$$\text{Top: } \left(\frac{95}{4} \text{ SF} \right) \left(\frac{9}{12} \right) = \frac{720 \text{ CF}}{4} = 180 \text{ CF} \quad \text{Slab C}$$

$$\text{Fig.: } \left(\frac{\pi 7^2}{4} \right) \left(\frac{11}{12} \right) - \frac{\pi 7^2}{4} \left(\frac{11}{12} \right) = 52 \text{ CF} + 124 \text{ CF} = 4.6 \text{ cy} @ \$250 = \$1150$$

$$\text{Excav: } \left(\frac{\pi 47^2}{4} + \frac{4 \pi 29^2}{4} + \frac{\pi 11^2}{4} \right) \frac{12}{6} - \frac{\pi 7^2}{4} (12) = 8482 \text{ CF} = 314 \text{ cy}$$

$$314 @ \$10 = \$3140$$

$$= \$3140$$

$$\text{Formwork} = \frac{\pi 11^2}{4} = 95 \text{ SF} @ \$7.50 = \$710$$

Footing Formwork

\$100

Misc.

450

$$\text{Support Beams: } 2(9) = 18' @ \$25 = 450$$

$$\text{Backfill} = 314 \text{ cy} @ \$5 = 1570$$

$$\underline{\$7,570}$$

VOID

$$\Delta = \frac{\$21,710}{25,760} = \$0.84/\text{cy}$$

#3A

assume 8' - 12' cover

3' ϕ hole \Rightarrow 7' ϕ cap

$$\text{Top: } \left(\frac{\pi 7^2}{4} \right) \left(\frac{7}{12} \right) = 22 \text{ CF} \quad \text{Slab A}$$

$$\text{Footing} = \left(\frac{\pi 7^2}{4} - \frac{\pi 3^2}{4} \right) \frac{11}{12} = 7.20 \text{ CF}$$

$$30 \text{ CF} = 1.08 \text{ cy} @ \$250$$

$$= \$270$$

$$\text{Formwork} = \frac{\pi 7^2}{4} = 7 \text{ SF} @ \$10.00 = \$70$$

Footing Formwork

\$50

MIS.

350

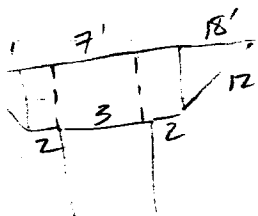
Support Beam = none

$$\text{Excav. + Backfill} \left(\frac{\pi (43^2)}{4} + \frac{4 \pi 25^2}{4} + \frac{\pi 7^2}{4} \right) \frac{12}{6} - \frac{\pi 3^2}{4} = 6908 - 7.06 = 6901 \text{ CF} = 256 \text{ cy}$$

$$@ \$5 = \$1280$$

$$\text{Total} = \$4,560$$

$$\Delta = \$5$$



J. Kretzmann

7-27-92

Grants II

Groundwater Levels, Poison Canyon

<u>Location</u>	<u>Approx. Ground Elev.</u>	<u>Depth to Water</u>	<u>Groundwater Elev.</u>
Barbara J#1	6880	dry @ 203'	< 6680
Barbara J#2	6880	181' (metane under ?)*	6700 (?)
Barbara J#3	6940	280'	6660
Barbara J#3A	6910	255'	6655
Well near hwy.	6755	100'	6655

∴ Groundwater appears to be near the 6640' to 6660' elevation.

Flea Mine

~ 7000

dry @
163'

< 6840

∴ Backfill with riprap to min. elev. 6940

<u>Location</u>	<u>Approx. Ground Elev.</u>	<u>Backfill w/ Riprap to no less than ___' Below Ground</u>
J#1	6880	140
J#2	6880	140
J#3	6940	200
J#3A	6910	170

* Only ~1' of water in bottom of shaft.

Quantity Takeoff

JAK

7-31-92

Fill Volumes / Zone - Barbara J Shafts

Vol. of Fill / VLF:

$$J\#1: (4)(9.4)\left(\frac{1.15}{27}\right) = 1.60 \text{ cy/VLF}$$

$$J\#2: (33.369)\frac{1.15}{27} = 1.42 \text{ cy/VLF}$$

$$J\#3: \left(\frac{\pi \bar{r}^2}{4}\right)\frac{1.15}{27} = 1.64 \text{ cy/VLF}$$

$$J\#3A: \left(\frac{\pi \bar{r}^2}{4}\right)\frac{1.15}{27} = \frac{0.21 \text{ cy/VLF}}{4.87 \text{ cy/VLF}}$$

Bentonite @
2.5 VLF (80# / CF)

$$(4)(9.4)(2.5) = 98 \text{ CF} \quad (7,520\#)$$

$$(33.369)(2.5) = 83.4 \text{ CF} \quad (6,674\#)$$

$$\frac{\pi \bar{r}^2}{4} (2.5) = 96.2 \text{ CF} \quad (7,697\#)$$

$$\frac{\pi \bar{r}^2}{4} (2.5) = 12.3 \text{ CF} \quad (982\#)$$

$$285.9 \text{ CF} = 10.6 \text{ cy} \quad (22,873\#)$$

Inert Gravel / Sand : @ 10 VLF

$$(4.87)(10) = 49 \text{ cy} \quad \text{use } 50 \text{ cy}$$

Bentonite : @ 2'-3' VLF

$$(4.87)(3) = 14.6 \text{ cy}$$

use 12 cy

$$(4.87)(2) = 9.7 \text{ cy}$$

$$= 324 \text{ CF}$$

@ 0.625 CF / bag = 520 bags

Borrow M.H.:

$$\frac{787}{825 \text{ cy}} - 50 - 12 = \frac{725}{763 \text{ cy}} \quad \text{use } 765 \text{ cy}$$

Soil:

$$37.7 \text{ cy}$$

$$\text{use } 40 \text{ cy}$$

9-8-92

On-site borrow (borrow + soil):

$$J\#1: (1.60)\left(\frac{140}{170-10-2-3}\right) = \frac{200}{248 \text{ cy}}, \text{ Int.}$$

$$+ 11.3 \text{ cy, Ext.}$$

$$\frac{241.3}{254.3 \text{ cy}} = \frac{5705}{7001 \text{ CF}} \Rightarrow 4' \times 25' \times 57'$$

$$J\#2: (1.42)\left(\frac{140}{170-10-2-3}\right) = \frac{177.5}{220 \text{ cy}} \text{ Int.}$$

$$+ 11.6 \text{ cy Ext.}$$

$$\frac{231.1}{231.7 \text{ cy}} = \frac{5106}{7250 \text{ CF}} \Rightarrow 4' \times 25' \times 51'$$

$$J\#3: (1.64)(170-10-2-3) = 254.2 \text{ cy}$$

$$+ 9.5 \text{ cy}$$

$$263.7 \text{ cy} = 7120 \text{ CF} \Rightarrow 4' \times 25' \times 71'$$

JAK
1-5-92

On-site borrow (cont.)

$$J\#34: (0.21)(200-10-2-3) = 38.9cy$$

$$+ 5.3cy$$

$$44.2cy \Rightarrow 1,192cy$$

$$\Rightarrow 4' \times 25' \times 12' \\ \text{OR } 4' \times 10' \times 30'$$

$$\text{Flea: N: } \frac{(1.0')(65')(13')(1.15)}{27} = 36cy = 972CF \Rightarrow 4' \times 25' \times 10'$$

$$S: \sqrt[3]{(63)^2(1.0)(7.7)(1.15)} = 100CF$$

$$1072CF \Rightarrow 4' \times 25' \times 11'$$

$$\Rightarrow 4' \times 10' \times 27'$$

$$\text{E. Malpais Lease: } 11.4cy = 308CF \Rightarrow 4' \times 10' \times 8'$$

$$\text{Beacon Hill \#18-23: } 35.5cy = 959CF \Rightarrow 4' \times 10' \times 24'$$

Beacon Hill Gossett:

$$\text{Airt: } \frac{(20')(15')(1.0)(1.15)}{27} = 12.8cy$$

$$\text{Vents: } 2(5.7) =$$

$$11.4$$

$$24.2cy = 653cy$$

$$\Rightarrow 4' \times 10' \times 16'$$

Grants II

J. Kretzmann

7-27-92

Estimate Riprap Volume / Weight

Estimate 15% Void space, 2.65 Specific Gravity

$$\therefore 1cy = 62.4 (2.65) (0.85) 27 = 3795\#$$

$$= 1.90 \text{ Tons}$$

Barbara J#1: 203' Deep (Measured)
- 140
63' Riprap

if 300' Deep
- 140
160' Riprap

$$(160)(4)(9.4)\left(\frac{1.15}{27}\right) = 256cy = 487 \text{ Tons}$$

$$\text{Vol.} = (63)(4)(9.4)\left(\frac{1.15}{27}\right) = 101cy = 192 \text{ Tons}$$

Barbara J#2: 182' Deep
- 140'
42' Riprap

if 460' Deep - 140 = 320'
 $(320)(33.3690)\left(\frac{1.15}{27}\right) = 455cy = 864 \text{ Tons}$

$$\text{Vol.} = (42)(33.3690)\left(\frac{1.15}{27}\right) = 60cy = 113 \text{ Tons}$$

Barbara J#3: ~510' Deep
- 200'
310' Riprap

if 435' D - 200' = 235'
 $(235)\left(\frac{\pi 7^2}{4}\right)\left(\frac{1.15}{27}\right) = 585cy = 732 \text{ Tons}$

$$\text{Vol.} = (310)\left(\frac{\pi 7^2}{4}\right)\left(\frac{1.15}{27}\right) = 508cy = 965 \text{ Tons}$$

Barbara J#3A: ~350' Deep
- 170
180' Riprap

300' D \Rightarrow 2,145 Tons.

$$\text{Vol.} = (180)\left(\frac{\pi 7.5^2}{4}\right)\left(\frac{1.15}{27}\right) = 38cy = 72 \text{ Tons}$$

1,342 Tons.

Use 1,500 Tons

J. Kretzmann

7-27-92

Grants II

Ventilation & Boreholes

Location	Vent. Holes	Boreholes (4"-6" ϕ or collapsed)
Bartona J#1	1-15" (46'D) ✓ 1-9" (7'D) 1-9" (48'D)	24 (6'-88'D)
Bartona J#2	1-18" (173'D) ✓ 1-15" (13'D) ✓	80 (5'-38'D)
Bartona J#3	1-12" (275'D) 1-12" (?) (capped)	8 (6'-131'D)
Bartona J#3A	1-12" (163'D) 8	8 (8+120 subtotal, Poison camp)
Flea Mine	1-13" (161'D) 1-13" (163'D) 1-13" (131'D) (dry)	45 (4'-98')

East Malpais 5-9" to 15" (45'-87'D) 64 (5'-77')

Beacon Hill #18-23 1-11" 80 (5'-38')

Beacon Hill Grant 1-11" (68'D) 110 (6'-163')

3 deep
14 shallow
+15%
16 shallow

419 (10+299 sub total, Me. Advantage)
+15%
482 Holes

498 Total
use 500 for bid quote

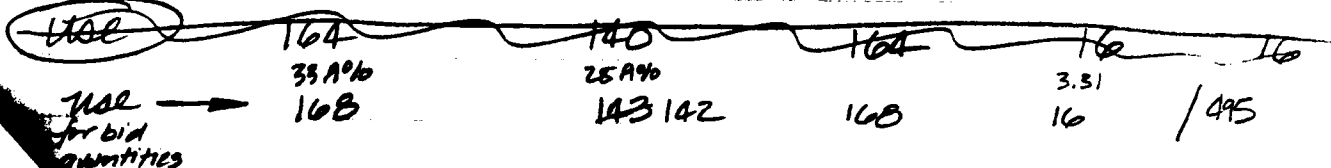
Grants II Measured boreholes

JAK
7-29-92

Location	0'-20'	>20'-50'	>50'-150'	>150'
Barb. J#2				
" J#3A				
" J#1				
" J#3				
Mesa Top				
Flea.				
East Malpais				
Beacon Hill/Gossett				
	41 0.32800-3300 0.3276	35 0.2000 0.2484	44 0.370 0.3548	54 0.0400 0.0524
	164	140 145	178 174/176	20 16

Try different depth classes:

Location	0'-20'	>20'-50'	>50'-100'	>100'-150'	>150'
Barb. J#2					
" J#3A					
" J#1					
" J#3					
Mesa Top					
Flea.					
E. Malpais					
B.H. Gossett					
	41 31.178 32.80%	35 26.0%	41 52.0%	4 3.20%	7 3.2%



8 boreholes > 50' in Poison Canyon

Grants II

Quantity Takeoff

Fill Volume above Riprap

Barbara J #1: Shaft

$$(140)(4)(9.4) \frac{1.15}{27} = V_{\text{int.}} = 224 \text{ cy}$$

$$V_{\text{ext.}} = 11.3 \text{ cy (prev. calcs)}$$

$$V_{\text{TOT.}} = 236 \text{ cy} \quad \text{use } \boxed{235 \text{ cy}}^*$$

Barbara J #2: Shaft

$$V_{\text{int.}} = (140)(33369) \frac{1.15}{27} = 199 \text{ cy}$$

$$V_{\text{ext.}} = 11.6 \text{ cy (prev. calcs)}$$

$$V_{\text{TOT}} = 211 \text{ cy} \quad \text{use } \boxed{210 \text{ cy}}^*$$

Barbara J #3: Shaft.

$$V_{\text{int.}} = (200) \left(\frac{\pi 7^2}{4} \right) \frac{1.15}{27} = 328 \text{ cy}$$

$$V_{\text{ext.}} = 9.5 \text{ cy}$$

$$V_{\text{TOT}} = 337 \text{ cy} \quad \text{use } \boxed{340 \text{ cy}}^*$$

Barbara J #3A:

$$V_{\text{int.}} = (170) \left(\frac{\pi 2.5^2}{4} \right) \frac{1.15}{27} = 35.5 \text{ cy}$$

$$V_{\text{ext.}} = 5.3 \text{ cy}$$

$$V_{\text{TOT.}} = 41 \text{ cy} \quad \text{use } \boxed{40 \text{ cy}}^*$$

TOTAL 825 cy

* Does not include volume of riprap fill at bottom of shafts

JAK

7-29-92

Quantity Takeoff / Cost Estimate

JAK

7-31-92

Boreholes:

≤ 20' Deep: say 6" φ × avg. 15' Depth =

$$VOL. = \frac{\pi \cdot 0.5^2}{4} (15) \frac{1.15}{27} = 0.125 \text{ cy}$$

0.00833 cy/LF

add 20% for collapsed holes

$$\Rightarrow 0.150 \text{ cy/hole}$$

use \$25/cy for hand placement + \$2/hole to locate, track

$$\Rightarrow \$3.75 + 2 = \$5.75/\text{hole}$$

> 20', ≤ 50' Deep: say 6" φ × avg. 38' Depth

$$VOL = 0.00833(38) = 0.317 \text{ cy} + 20\% \text{ for voids}$$

$$\Rightarrow 0.380 \text{ cy/hole}$$

$$\Rightarrow \$11.50/\text{hole}$$

> 50', ≤ 100' Deep: say 6" φ × 75' Depth avg.

$$VOL = (0.00833)(75) = 0.625 \text{ cy} + 20\% \text{ for voids}$$

$$\Rightarrow 0.75 \text{ cy/hole}$$

$$\Rightarrow \$20.75/\text{hole}$$

> 100', ≤ 150' Deep: say 6" φ × 125' Depth avg.

$$VOL. = 0.00833(125) = 1.047 \text{ cy} + 20\% \text{ for voids}$$

$$\Rightarrow 1.25 \text{ cy/hole}$$

$$\Rightarrow \$33.25/\text{hole}$$

> 150' Deep, Poison Canyon: 12" φ use 12" φ avg.
18" φ

Temp. Bridge / Concrete @ 50' Deep:

$$\left(\frac{\pi \cdot 1.0^2}{4} \right) \left(\frac{1.20}{27} \right) (10) = 0.35 \text{ cy conc.}$$

$$@ \$250 = \$87.50$$

$$+ \$15.00$$

Bridge:

$$\text{1 rest Sand / Gravel & Soil } (0.035 \text{ cy/LF}) 50 = 1.75 \text{ cy}$$

$$1.25 \Rightarrow \$45.75$$

$$\text{Bentonite } 2 \text{ VLF } (0.035 \frac{\text{cy}}{\text{VLF}}) (27 \frac{\text{CF}}{\text{cy}}) = 1.89 \text{ cy}$$

$$\Rightarrow 3 \text{ Bags @ } \$10 = \$30$$

$$\text{TOT. } \$ = \$178.25 \text{ use } \$180.00$$

>150' Deep, Mesa Montañosa 13" ϕ x 200'D

$$\text{VOL.} = \left[\frac{\pi \left(\frac{13}{12} \right)^2}{4} \right] \left(\frac{1.15}{27} \right) (200) = 7.85 \text{ cy} + 20\% \text{ for void}$$

$$\Rightarrow 9.42 \text{ cy}$$

$$\Rightarrow \$237.50/\text{hole}$$

or use conc. plug.

$$\text{EXV. } \$20$$

$$\text{Conc. } (0.0393 \text{ cy/VLF}) (10) = 0.39 \text{ cy}$$

$$@ \$200$$

$$= \$78$$

$$+ \$15$$

$$+ \$10$$

$$\underline{\$193}$$

$$\text{use } \$125$$

Bridge

Soil fill, use

JAK

7-31-92

Quantity Takeoff

Seeding:

	J#1	J#2	J#3	J#3A	File
Shuts:	900	900	700	400	900
+ Adits	^{PAN.} 1500	^{PLS.} 500	^{BA#15-23} 1500	^{BA#} 1000	300 + 300
	$= 8900 \text{ ft}^2$				

$\approx 0.20 \text{ Ac.}$

Bowties: Access roads, etc. ^{Soy} 0.75 Ac.

0.75 Ac.

Borrow Areas: ^{Soy}

1.0 Ac.

Misc Waste Piles: ^{Soy}

0.25 Ac.

Misc.:

0.25 Ac.

2.45 Ac.

^{use}
2.50 Ac.

Grants I

Field Notes

7-23-92

JAK

Barbara J#2, Shaft

Depth: 228 Rev. Fishing Rod.

West Vent: 15' ϕ x 13' D

182' Tape

181' Water Level (Water Level Indicator)

Barbara J#1, Shaft

Depth: ~~143~~²⁶³ Rev. Fishing Rod

203' Tape dry

Barbara J#3 Shaft

Depth: > 300' Tape wet @ ~ 280'

logged at
445' level

Standpipe: 31" O.D. x 16' High.

Broke Water Level Indicator cord @ ~ 40' when
caught on something; ~~right~~ probe lost

Rod (7-24-92): 687 Rev. (~ 510' deep)

Barbara J#3A Vent Shaft

With ^{300'} tape water @ ~ 255' down.

7-24-92

Mesa Top, borehole by road

12" x 24' d(+) 4' d x 5' ϕ
to bottom of larger hole

Bontana J#3A

Down hole camera

7-23-92

JAK T-136m
EK (Pinks)

3-A

> 1 blue tape-bottom of casing / rock below (concrete?)
56' down

Top of casing 3.9' above ground. \therefore rock at ~52' below ground

Bontana J#2

@ 152' plumbing, except between compartments, stops

7-23-92

as above
Raymond L.

Bontana J#1

47' 1st tape concrete / but timber below
rib?

~10' below some collapsed timbers

58' 2nd tape rock? behind lagging // collapsed timbers

61' 3rd tape more rock below / shotcrete? more collapsed timbers

drift?

ventilation frame / rock

~10' below conc. rib.

lagging between ~~logs~~ not collapsed below

no lagging separation between compartments

lagging generally good

some collapsed lagging / rock

conc. ribs ~5' O.C.

good lagging deeper
ended ~25' from bottom

7-24-92

T-20 boreholes, West side

Rick: 2 failures of backfill out of 11

Ray: 2 " " " " 10

John: 0 " " " " 18

Tristan: 1 " " " " 10

5

49

1 not backfilled

4 " "

T-20 shaft, other side of road

Ray: 0 " " " 18

Rick: 0 " " " ~~24~~

John: 0 " " ~~2~~ " 2

Tristan: 0 " " " 9

0

33

3 vents holes OK

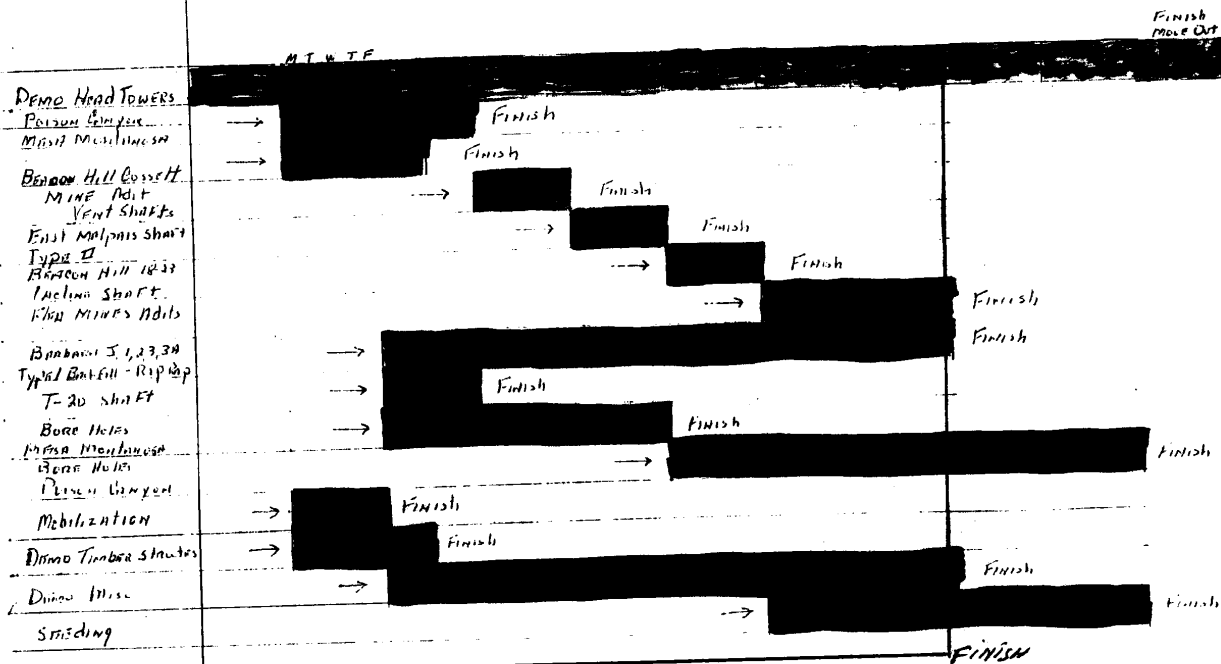
1 not backfilled

T-20 shaft: 4' x 9' x 10' deep subsidence
widening at bottom

KHANN, C.

CONSTRUCTION SCHEDULE

CRANES. LAMINATION PHASE II - Mine Safeguard Project at MINARD 10/11/42-43



Re
C

4/24/93

Mesa
Montosa

LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
			9	23	53	118	X
			11	26	95	105	X
			14	27	82	139	
			6	40	56	143	
				24	54	120	
				37	78		
				38	81	102	
				20	91	116	
				40	76	119	
				24	64	106	
				48	71	112	
				30	67	140	
					93	110	
					63		
					96		
					27		
					67		
					53		
					83		
			13	19	12	2	= 50

GRANTS URANIUM PHASE II

MINE SAFEGUARD PROJECT

Masa Pontosa

⑥ GRANTS Uranium PHASE II
MINE - SAFEGUARD PROJECT

Prison Canyon

GRANTS Uranium PHASE II
— MINE SAFEGUARD PROJECT

3/24/93

16'
70
169' 30"
173' 30"
42'
81'
39'
98'
40'
122'
18'
37'
17'
37'
71'
10'
4'
11'
7'
16'
24'
48'
6'
18'
194'
73'
48'
46'
22'
61'
151' over
100'
143'
105'

LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
14' B#2			16'		70'		
11' B#2			14'				169' 30"
54' B#2			11'	42'	54'	107'	173' 30"
107' B#2				39'	81'	122'	
103' B#2					98'		
55' B#2				40'	55'	112'	
113' B#2						122'	151'
104' B#2			18'			104'	
6' B#3			6'	37'			
B#3			17'				
4' B#2			4'	37'			
28' B#2				28'	71'		
B#2			10'				
21' B#2			4'	21'			
119' B#2			11'			119'	
26' B#2			9'	26'			
B#2			16'	24'			
19' B#2			19'				
57' B#2			6'	48'	57'		
63' B#2			15'	48'	63'		
B#2			16'		73'		194'
16'			5'				
5'			17'	46'			
17'				23'		99'	
99'			6'		55'		
6'					84'	100'	151' over
55'					51'	81'	
84'					100'	143'	
51'						105'	
100'				21'		101'	163'

19 14 14 10 5

GRANTS URANIUM PHASE II MINE SAFEGUARD PROJECT

17' X 3X3
17' X 3X3

3/23/93

MESA
Mandose

42'
41'
43'
41'
42'
43'
42'
22'
22'
62'
12'
67'
66'
34'
43'
3'
55'
40'
47'
14'
27'
45'
13'
24'
8'
Total
25

LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
East	3/23/93			42'			
Wagon	" "			41'			
"	" "			43			
"	" "			41'			
"	" "			42'			
"	" "			43			
"	" "			42'			
"	" "		22'				
"	" "				82'		
"	" "				62'		
"	" "		12'				
"	" "				67'		
"	" "				66'		
"	" "				34'		
"	" "		3'		43'		
"	" "				43'	55'	
"	" "				40		
"	" "					42'	
"	" "						
"	" "		14'		27'		
"	" "				45'		
"	" "		13'				
"	" "			24'			
"	" "		8'				
"			5	9	9	2	

29
25
214
492
606

GRANTS URANIUM PHASE II MINE SAFEGUARD PROJECT

3/24/93

	LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
16-5-194	Barbara J			16' 14' 11'	42'	70'		
70-17-46	BJ #1				29'		107'	169'
169-99-22				18' 6'	40'	54'	122'	173'
173-6-61				17'	37'	81'		194'
42-55-151				4' 10'	37'	98'	112'	151'
81-84-101				4' 11'	28'	55'	122'	163'
29-51-143				7'	21'	71'	104'	
98-101-105				16' 19'	26' 24'		119'	
40-21-14				6'	48'	57'	99'	
122-163-11				15'	48'		143'	
18 54				16'	46'	63'	105'	
37 107				5'	22'	73'	101'	
17 122				17'	21'	61'		
37 55				6'		55'		
71 112						84'		
10 104						51'		
4 6						100'		
11 4								
7 28								
16 21								
24 119								
48 26								
6 19								
15 57								
73 63								
48 16								

19

14

14

10

5

GRANTS URANIUM PHASE II

MINE SAFEGUARD PROJECT

3/23/53

LOCATION		STARTING DATE	COMPLETE DATE	2'-20'	2'-50'	5'-100'	10'-150'	15'-OVER
10'	3'	Gracen Hill	3/23/53	15	10	33	88	117
13'	7'			15	11	22		104
11'	12'			18	11	21		112
7'	4'	42		25	42	23		
11'	2'	"		9	7	39	68	118
42'		"		28	2	22		110
2	2	"		8	10	29	52	121
10	11	"		52	7	41		
7	5	"		5	4	25		
4	15	"		15	15	25		
15	69	"		17	6	42		
6	25	"		6	3			
3	9	"		3	13			
13	25	"		18	13			
15	8	"		3	16			
16	52	"		17	3			
3	5	"		14	12			
33	15	"		8	8			
12	17	"		26	3	26		
8	6	"		15	12			
22	3	"		11	13	32		
3	18	"		12	15			
12	3	"		4	2			
13	41	"		32	7			
15	17	"		7	2			
21	14	"		6	18			
2	8	"		13	3			
7	118	"			2			
2	26	"			16			
117	15	"			9			
18	11	"			3			
3	12	"			8			
2		"			10			
8	110	"			7			
16	4	"			8			
23	121	"			2			
9	32	"			7			
3	7	"			9			
8	6	"			3			
39		"			7			
22		"			12			
10		"			4			
7		"			2			
104		"			2			
112		"			11			
88		"			5			

21 46 13 3 6 = 89

GRANTS Uranium PHASE II MINE - SAFEGUARD PROJECT

3/22/93
FLER - mine
MESA Montosa

		LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
23'						23'			
39'						39'			
35'	73'	F/c Mine	3/2/93	3/21/93		35'	73'		
	38'					38'			
54'	39'	"		"		39'	54'		
32'	7'	"		"	7'	32'	63'		
63'	41'	"		"		41'			
97'	47'	"		"		47'	97'		
	41'	"		"		41'			
3'	63'	"		"	3'	63'			
	39'					39'			
134'	70'	"		"		70'		134'	
140'	44'	"		"		44'		140'	
37'	37'	"		"		37'	71'		
	37'	"		"		37'			
2'	23'	"		"	2'	23'			
71'	27'	"		"		27'			
31'	10'	"		"	10'	31'			
56'	37'	"		"		37'	56'		
134'	137'	"		"				134'	
56'	59'	"		"		56'		137'	
41'	58'	"		"		41'	58'		
	41'	"		"	5'	41'			
5'	50'	"		"		50'			
73'	48'	"		"		48'	73'		
41'	96'	"		"		41'		96'	
59'	6'	"		"	6'	39'	59'		
39'	7'	"		"	7'				
	88'	"		"		46'	88'		
46'	53'	"		"		28'	53'		
32'	51'	"		"		31'	51'		
44'	27'	"		"		44'	27'		
35'	53'	"		"		35'	53'		
23'	64'	"		"		23'	64'		
34'	10'	"		"	10'	34'		159'	
159'	51'	"		"			51'	159'	
55'	45'	"		"		45'	55'		
39'	58'	"		"		39'	58'		
73'	29'	"		"		29'	73'		
23'		"		"		22'			
37'		"		"			37'		
58'		"		"			58'		
67'		"		"			67'		
6'		"		"			61'		
57'		"		"			57'		
45'		"		"		45'			
31'						31'			

GRANTS URANIUM PHASE II
MINE SAFEGUARD PROJECT

MESA.
Montosa

3/22/93

	LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
29'	6' Fleg	3/22/93	3/22/93	6'	28'			
53'	6' Mine	"	"	6'		53'		
61'	"	"	"			61'		
30'	58'	"	"		30'			
42'	"	"	"		42'	58'		
64'	"	"	"			64'		
58'	57'	"	"		30'	58'		
37'	"	"	"			57'		
46'	"	"	"		46'			
30'	"	"	"		30'			
55'	"	"	"		55'			
53'	"	"	"			53'		
40'	"	"	"		40'			
38'	"	"	"		38'			
53'	"	"	"		39'	53'		
39'	23'	"	"		23'			
52'	35'	"	"		25'	50'		
	33'	"	"		33'			
63'	38'	"	"		28'	63'		
4'	"	"	"	4'				
	43'	"	"		43'			
	16'	"	"	6'				
26'	16'	"	"	16'	36'			
38'	13'	"	"	13'				
56'	33'	"	"	33'		56'		
40'	7'	"	"	7'	40'			
33'	"	"	"		33'			
	13'	"	"	13'	34'	34'		
34'	34'	"	"					
51'	10'	"	"	10'	46'	51'		
	46'	"	"					
136'	56'	"	"			56'	136'	
14"	14"	"	"			14"	16"	
33'	50'	"	"		50'			
34'	30'	"	"		30'			
	21'	"	"		21'			
	36'	"	"		36'			
4'	30'	"	"	4'	30'			
	44'	"	"		44'			
	36'	"	"		36'			
	33'	"	"		33'			
	33'	"	"		33'			
350'	30'	"	"		30'			350' lower
	5'	"	"					
50'	26'	"	"	5'	26'			
04	36'	"	"	13'	36'	56'		
	13'	"	"					
136'	18'			18'	33'	15'	2	126' 16"

GRANTS URANIUM PHASE II
MINE - SAFEGUARD PROJECT

MESA
montosa

LOCATION	

STARTING DATE

COMPLETE
DATE

2-20-

21-50-

51-100-

101-150-

51- OVER

190'
48'
51'
23'
57'
23' 159' total

17'
23'
151'
53'
57'
98'
153'
89°

3/22/93

3/22/93

13/22/93

3/03/93

(C C)

LC 1)

1000

α γ

1631

1531

1000

484

574

83

57

831

174

23

151

151

53

572

150

89

1 4 5 1 3

GRANTS Uranium PHASE II

MINE SAFEGUARD PROJECT-11

3/19/93

MESA
Montoso

90'
73'
56'
71'
81'
5'
56'
87'
44'
77'
38
74'
93'
68'
121'
4'
141'

102'
53'
93'
87'
70'
5'
80'
53'
67'
48'
131'
6'
56'
57'
93'
67'
65'
79'
56'
72'
63'

6'
47'
82'
26'
57'
33'
19'
57'
57'
46'
25'
20'
58'
53'
89'
81'
65'
83'
38'
46'
3'
4'
81'
49'
131'
14'
108'
66'
65'
49'
37'
58'
18'
77'
91'
48'
50'
5'
4'
3'
86'
51'

LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
		3/17			90'		
		"	6'	47'	73'		
		"		26'	82'		
		"	5'		81'		
		"		33'	56'		
		"	19'	44'	57'		
		"	7'		82'		
		"		38'	57'		
		"		46'	74'		
		"	20'	25'	93'		
		"			68'	121'	121'
		"			58'		
		"			53'	141'	
		"	4'		89'		
		"			81'		
		"			65'	103'	
		"		38'	83'		
		"		46'	53'		
		"	5'		93'		
		"	4'		87'		
		"			70'		
		"	5'	49'	81'		
		"			80'	131'	
		"	14'		53'		
		"		48'	67'	102'	
		"	6'		65'	121'	
		"		49'	56'		
		"		37'	57'		
		"	18'		58'		
		"			93'		
		"			77'		
		"			67'		
		"			91'		
		"		48'	65'		
		"	5'		79'		
		"	4'		56'		
		"	3'		72'		
		"			63'		

(15) (15) 51' 7

GRANTS URANIUM PHASE II
MINE SAFEGUARD PROJECT

3/19/93
MESA
Montosa

LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
73'	3/19/93	3/19			73'		
154		"			77'		154'
77'		"	10'	10'	51'		
63-		"		26	77'		
63'		"			63'		
74'		"			54'		
7'		"			63'		
38'		"			74'		
14'		"			77'		
53'		"			93'		
79'		"			74'		
68'		"	7'	38'			
87'		"		23'			
63'		"	14'	36'			
58'		"			74'		
37'		"		41'			
53		"		50'	53'		
65'		"	18'		79'		
46'		"		45'			
80'		"	13'		68'		
89'		"	5'		83'		
76'		"			87'		
68'		"			63'		
156'		"		36'	58'		
70'		"		37'	71'		
67'		"			65'		
98'		"			76'		
		"			53'		158'
		"	3		54'		
		"			65'		
		"			89'		
		"		46'	81'		
		"			80'		
		"			62'		
		"		48'	59'		
		"			76'		
		"			68'		
		"			55'		
		"			80'		156'
		"		43'			
		"		37'	76'		
		"			68'		
		"			55'		
		"			80'		
		"			98'		158'
		"			54'		

(7)

(13)

(39)

(4)

GRANTS URANIUM PHASE II
MINE SAFEGUARD PROJECT

3/19/93

MESA
Montrose

70'
76'
82'
16'
91'
35'
18'

19'
55'
45'
31'
44'
74'
73'
70'
66'
70'
11'
74'
40'
52'

LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
	3/19		19'		70'		
	11			49'	76'		
	"		16'	31'	55'		
	"			44'	82'		
	"		18'	35'	91'		
	"				74'		
	"				73'		
	"				70'		
	"				66'		
	"		11'		70'		
	"				74'		
	3/19			40'	52'		

(4) (5) (12)

GRANTS URANIUM PHASE II
MINE SAFEGUARD PROJECT

3-18-93

WASS
montrose

39'
30'
10'
45'
17'
58'
78'
43'
66'

9'
42'
38'
5'
101'
81'
45'
73'
12'
67'
70'
851-34
43'
59'
35'
67'

LOCATION

STARTING
DATE

COMPLETE
DATE

2'-20'

21'-50'

51'-100'

101'-150'

151'-OVER

2/18

2/18

2/18

2/18

2/18

2/18

2/18

2/18

2/18

9'
30'
10'
5'
17'
8'

39'
42'
38'
45'
101'
45'

58'
73'
78'
67'
70'

12'

43'

43'

35'

35'

67'

7 9 9 1

GRANTS URANIUM PHASE II
MINE SAFEGUARD PROJECT

042-150
9102
MESA
Montross

100'
89'
52'
15'
30'
30'
43'
28'
67'-8"
74'
8"

16'
46'
57'
12'
69'

45'-9"

38'
77'
27'
30'
33'
19'
32'
54'-9"

62'
70'
51'
13'
26'
57'
15'
18'

LOCATION	STARTING DATE	COMPLETE DATE	2'-20'	21'-50'	51'-100'	101'-150'	151'- OVER
70'	4/7	4/7	15'		100' 89'	101'	
10'	4/7	4/7	20'		53' 20'		
5'	4/7	4/7	10' 30' 5'	43'			
74'	4/7	4/7		38'	67'		
75'	4/7	4/7			74' 74'		
25'	4/7	4/7	16'	35'	75'		
71'	4/7	4/7			71'		
75'	4/7	4/7		46'	73'		
91'	4/7	4/7			57'		
78'	4/7	4/7	12'		78'		
41'	4/7	4/7	4	14'	86'		
86'	4/7	4/7			69'		
14'	4/7	4/7		45'			
46'	4/7	4/7		46'	51'		
51'	4/7	4/7		49'	38'	46'	
49'	4/7	4/7		26'	77'		
46'	4/7	4/7		27'	59'		
26'	4/7	4/7			63'		
59'	4/7	4/7		15'	30'		
63'	4/7	4/7	18'	19'	36'	33'	
15'	4/7	4/7		32'			
36'	4/7	4/7		54'			
18'	4/7	4/7		61'			
32'	4/7	4/7		47'	61'		
54'-9"	4/7	4/7		43'	63'		
61'	4/7	4/7		51'	70'		
47'	4/7	4/7			52'		
43'	4/7	4/7	13'		73'		
51'	4/7	4/7	5'	26'	79'		
13'	4/7	4/7		58'			
26'	4/7	4/7	6'		57'	118'	
57'	4/7	4/7	15'	15'	63'	91'	
15'	4/7	4/7	18'			122'	
18'	4/7	4/7					

18 17 59 3

Total 2 plugged 16" GRANTS URANIUM PHASE II
MINE SAFEGUARD PROJECT

LOCATION		STARTING DATE			COMPLETE DATE		2'-20'	21'-50'	51'-100'	101'-150'	151'-OVER
6'-155'	23-16	2/17	2/17	2/17	6-108	14-313					X
14'-67'	23-19	2/17	2/17	2/17			67'	40	67		X
11'-											
40'-65'	23-18	2/17	2/17	2/17	-14'	65'			65'		
10'-14'									63'		
8'-63'	23-18	2/17	2/17	2/17				36'			
13'-36'								49'			
4'-											
-49'	23-18	2/17	2/17	2/17	11-13						
13'-60'									60'		
29'-14'					329'						
12'-56'					4-12	-14			66'		
14'-											
-34'					9-14'			34'			
17'-											
35'-					10-17'	5'		36'			
38'-36'					0-35'						
30'-33'								33'			
11'-79'					238'	30'		38'			
9'-68'					0-11			30	79'		
11'-20					0-9'				68'		
3'-20					0-11'	20'					
3'-81'					0-3'						
10'-20'					0-31'	20'			81'		
14'-20'					0-10'						
7'-87'					0-14'				87'		
38'-					0 7'						
5'-65'											
35'-64'					0-5'	0-38'			65'		
31'-											
42'-62'					0-35'				64'		
46'-					0-31'						
3'-69'											
31'-					42'	46'			62'		
5'-71'					0-3'	0-31'			69'		
33'-											
52'-15'					5'	0-53'	71'	52'			
35'-											
58'-77'					15'	0-35'					
39'-											
68'-63'					77'	59'	77'	58'			
100'-32'					(10')		39'	0-39'			
45'-							32'	62'	68'		
67'-								0-100'			
35'-					4		45'	0-67'			
39'-							35'				
							39'				

35 21 20 1 2 79 + 10

GRANTS URANIUM PHASE II MINE SAFEGUARD PROJECT

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505



BRUCE KING
GOVERNOR

March 10, 1993

ANITA LOCKWOOD
CABINET SECRETARY

Naser Alikhani, President
Khani Company
13816 Winterwood Way SE
Albuquerque, New Mexico 87123

**RE: EMNRD-MMD-92-5 Grants Uranium Phase II Mine Safeguard Project -
SUBSTITUTION OF VINYL LINERS FOR COMPACTED IMPERVIOUS ZONES**

Dear Mr. Alikhani:

We are in receipt of your letter and submittal dated March 3, 1993 regarding the substitution of vinyl liners in place of the compacted impervious zones at the decline adit and Type 2 shaft closures. Since the proposed synthetic liners can meet the design objective of minimizing the flow of surface water through the mine waste fill to prevent migration of toxic materials, I will accept vinyl liners as a substitute, without change in the lump sum contract prices for the affected mine closures. I agree with your comment that the 30 mil PVC liner is superior to the 60 mil VLDPE liner because of its elasticity, should the fill zones at the mine openings settle. We accept the 30 mil PVC liner by Environmental Liners, Inc. with the following provisions:

- a. Not only the soil cover over the liners, but also the uppermost layers of the mine waste shall be equipment compacted in maximum six-inch lifts to form a solid support for the liners.
- b. The mine waste shall be mounded to one foot above natural ground or the top of the shafts to allow for some settlement of the fill.
- c. The material immediately below and above the liners shall be free of gravel and rocks larger than 1½ inches to protect the liner from puncture. All rocks larger than three inches shall be removed from the material placed within six inches of the liners.

VILLAGRA BUILDING - 408 Galisteo
Forestry and Resources Conservation Division
P.O. Box 1948 87504-1948
827-5830
Park and Recreation Division
P.O. Box 1147 87504-1147
827-7465

2040 South Pacheco
Office of the Secretary
827-5960
Administrative Services
827-5925
Energy Conservation & Management
827-5900
Mining and Minerals
827-5970

LAND OFFICE BUILDING - 310 Old Santa Fe Trail
Oil Conservation Division
P.O. Box 2088 87504-2088
827-5800

Mr. Naser Alikhani
March 10, 1993
Page 2

d. The edges of the liner sheets shall be turned down a minimum of 12 vertical inches into trenches or keys around the perimeter of the shafts and adits, so that water is shed off to the sides of the backfilled mine openings. At some locations this may necessitate excavation into shallow bedrock.

e. The manufacturer recommended to me that the maximum slope to prevent the soil cover from sliding off the liners at adit closures was approximately 2.5h:1v. In order to minimize the potential for sliding and erosion, especially at the south Flea Mine adit, the liners and soil covers shall be placed not steeper than three horizontal to one vertical (3h:1v). This corresponds with the requirements of Section 02211 and the original Figure 13 in the Project Manual.

f. Required liner dimensions, to meet the above requirements and those indicated in revised Figures 12 and 13, shall be field checked before fabrication of the sheets to minimize the need for field welding. Any field welding shall be done in strict accordance with manufacturer's recommendations.

Refer to the attached revised Figures 12 and 13. Also enclosed are two copies of your submittal marked "No Exceptions Noted."

Sincerely,

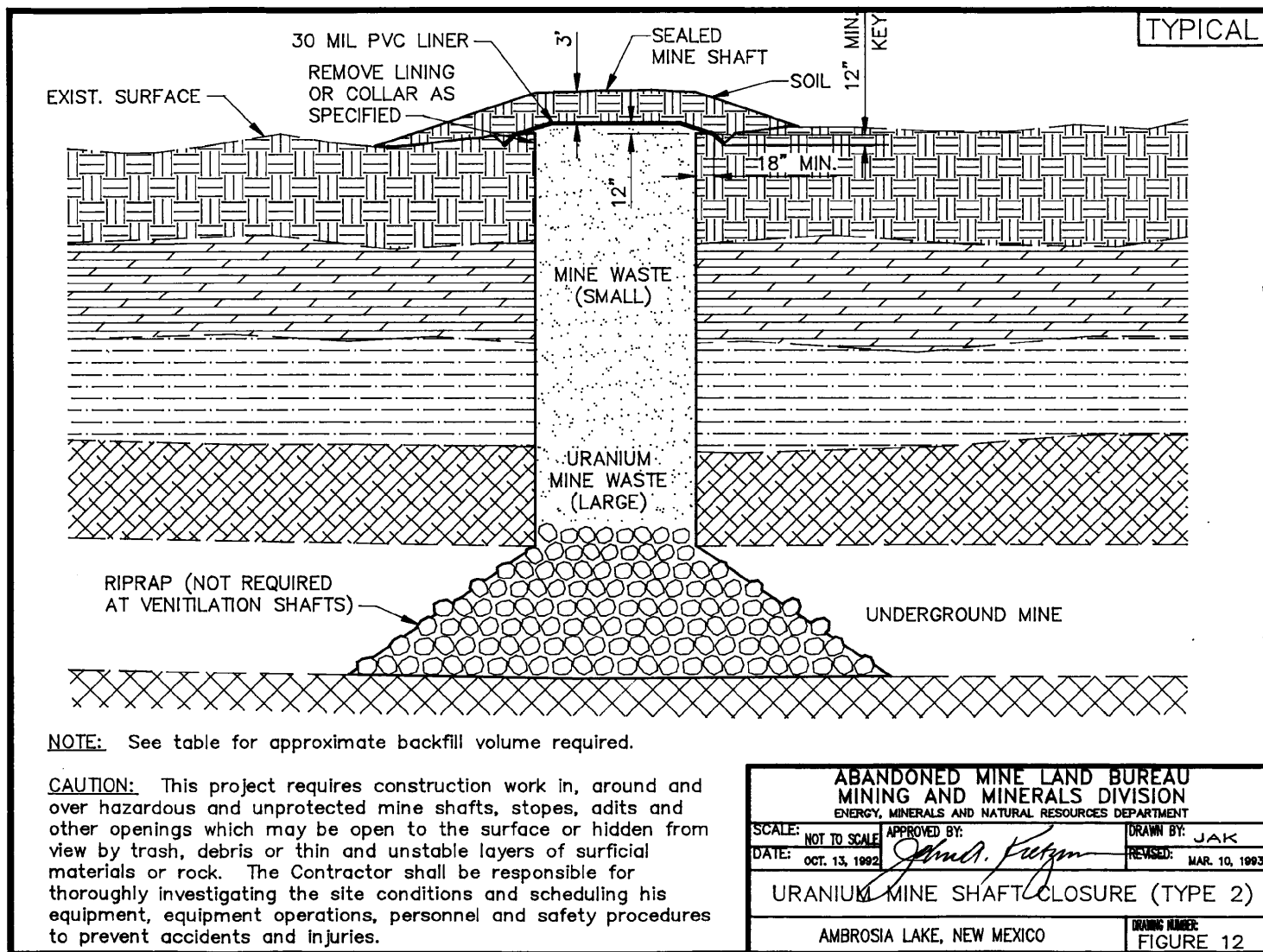


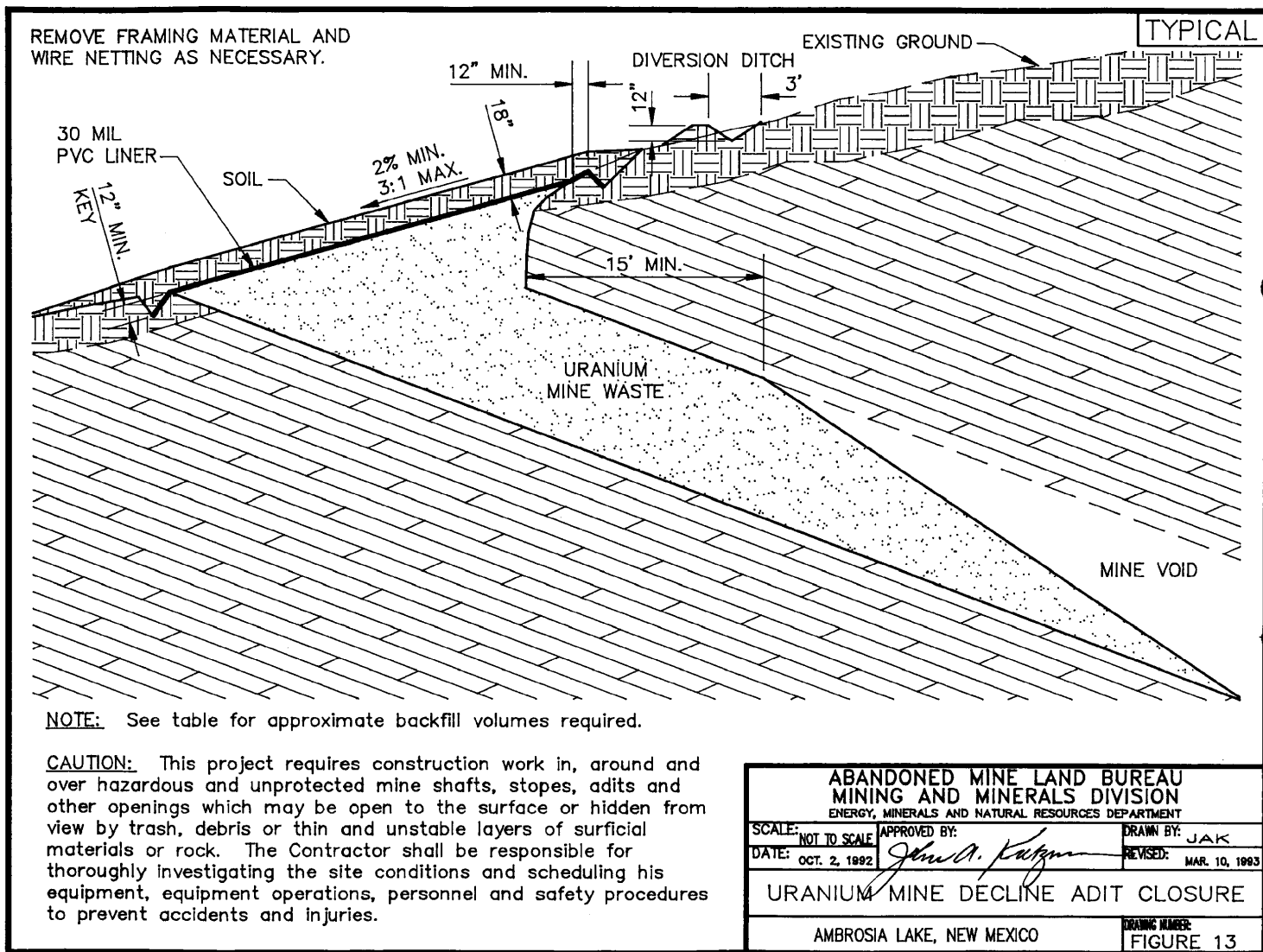
John A. Kretzmann, P.E.
Project Engineer
Abandoned Mine Land Bureau
Mining and Minerals Division

JAK:jak

Enclosures

xc: ✓ Construction Reports (i), w/ enclosures
Robert M. Evetts, Program Manager, w/ enclosures
Raymond Rodarte, Project Manager, w/ enclosures







KHANI CO.

GENERAL CONTRACTOR

License No. #031999

March 3, 1993

Mr. John A. Kretzmann, P.E.
Project Engineer
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505-5472



RE: ENRD-MMD-92-5 Grants Uranium Phase II

Dear John:

We are in receipt of your letter dated February 23, 1993, and are responding herein according to your comments commencing with subparagraph "a".

- a. We agree; good compaction will be achieved by the use of heavy equipment track walking the material in 6" lifts.
- b. We agree to one foot above natural ground or shaft top, whichever is higher in elevation.
- c. We disagree to sand or gravel being placed; however, we will remove all rocks in the bottom and top layer. No rock will be placed directly under or on top exceeding 1½" in diameter. Hand picking of large rocks will take place prior to the bottom layer and again after the first 6" of the top layer is placed. We agree that our concern is not to puncture the membrane. No manufacturer recommendations are known.
- d. We agree; however, we cannot blast or rip the rock. We do believe that our large backhoe can make the trench as needed.
- e. We disagree as reinforced liner material of either type has any give to it. It will not stretch; it will tear first.
- f. We disagree; a one-foot recommendation into rock or dirt is sufficient with two to three feet of fill over the keyed depth.
- g. No recommendation is known; however, if the keyed ditch is filled over by two to three feet of material, it will stay in place.
- h. We accept your dimensions; however, we must have the material made in a continuous or solid piece here in Albuquerque so as to avoid field welds. We suggest that we meet early in the start of the project to agree as to actual dimensions that will be needed.

Since the two samples attached are two entirely different products and stretch and mounding are two primary points to be considered, we recommend the 30 mil PVC. Our cost is approximately the same for each type and you may select either kind as both products are good; however, we feel the 60 mil is too rigid and will not give nor remain intact should settlement occur. Thank you.

Sincerely,

Naser Alikhani
President

13816 Winterwood Way SE • Albuquerque, New Mexico 87123 • (505) 299-1000 • Mobile 1-264-1700



ENVIRONMENTAL LINERS, INC.

2009 NORTH INDUSTRIAL ROAD • CORTEZ, COLORADO 81321 • INTERSTATE 1800 R21 0531
IN COLORADO 303: 565-9540 • 565-4221 • TELECOMMER 303: 565-9644

PVC GEOMEMBRANE SPECIFICATION GUIDE ENGINEERING SPECIFICATION

Property	Test Method	Specified Values					
Thickness mils Nominal $\pm 5\%$	ASTM D-1593	10	20	30	40	50	60
Specific Gravity	ASTM D-792	1.20	1.20	1.20	1.20	1.20	1.20
Minimum)							
Minimum Tensile Prop. each direction)	ASTM D-882						
1. Breaking Factor (lbs/in width) (PSI)	Method A or B (1 inch wide)	23 (2300)	46 (2300)	69 (2300)	92 (2300)	115 (2300)	138 (2300)
2. Elongation at Break ¹ (%)	Method A or B	325	325	325	350	400	450
3. Modulus (force) at 100% Elongation (lb/in width) (PSI)	Method A or B	10 (1000)	20 (1000)	30 (1000)	36 (900)	45 (900)	54 (900)
Leak Resistance (lbs, minimum)	ASTM D-1004 Die C	3	6	8	10	12	14
Low Temperature, °C (°F)	ASTM D-1790	-23 (-10)	-26 (-15)	-29 (-20)	-29 (-20)	-29 (-20)	-29 (20)
Dimensional Stability each direction, % change maximum)	ASTM D-1204 100°C (212°F), 15 min.	5	5	5	5	5	5
Water Extraction % loss maximum)	ASTM D-3083 (Ref. NSF Standard 54)	-0.25	-0.25	-0.25	-0.35	-0.35	-0.35
Volatile Loss % loss maximum)	ASTM D-1203 Method A	1.5	0.9	0.7	0.5	0.5	0.5
Resistance to Soil Burial (% change maximum in original value)	ASTM D-3083 (Ref. NSF Standard 54)						
1. Breaking Factor		5	5	5	5	5	5
2. Elongation at Break		20	20	20	20	20	20
3. Modulus at 100% Elongation		20	20	20	20	20	20
Hydrostatic Resistance (lbs/sq in. minimum)	ASTM D-751 Method A	37	60	82	82	110	150

*No Exceptions
Noted
3-10-93
See transmittal letter
for installation details*

Factory Seam Requirements²

ed Seam Strength	ASTM D-3083	18.4	36.8	55.2	74	92	110
actory seam, breaking	(Ref. NSF						
tor, ppi width)	Standard 54)						
Adhesion	ASTM D-413	10	10	10	10	10	10
/in minimum)	(Ref. NSF						
	Standard 54)						
stance to Soil	ASTM D-3083						
al (% change	(Ref. NSF						
mum in original	Standard 54)						
e)							
el Adhesion		-20	-20	-20	-20	-20	-20
nded Seam Strength		-20	-20	-20	-20	-20	-20

e jaw separation method is to be used to determine elongation percent.

actory bonded seam strength is the responsibility of the fabricator.

specification is based on minimum NSF Standard 54 values and is intended to serve design aid. We assume no liability for incorrect design or product usage. The stan-
product supplied by Environmental Liners will meet or exceed these minimum values.

R

G

#92018-07-35067-92-05

GRANTS URANIUM PHASE II

j) post-construction information and reports

J

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following service for an extra fee):

- 1. ☐ Addressee's Address
- 2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Robert Lopez, Owner
P.O. Box 456
Penasco NM 87553

4a. Article Number

Z 062 024 802

4b. Service Type

- ☐ Registered ☒ Certified
- ☐ Express Mail ☐ Insured
- ☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: (Print Name)

Robert Lopez

6. Signature: (Addressee or Agent)

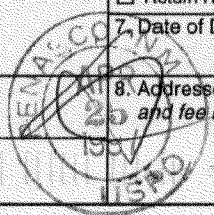
X Robert Lopez

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.



UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS E RIDE
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

Energy, Minerals and Natural
Resources Department
Mining and Minerals Division
2040 South Pacheco Street
Santa Fe NM 87505

Attn: Ray Rodarte

*Hi Ray
Shirley*

RECEIVED
APR 28 1997
MINING & MINERALS DIV.

43



January 20, 2000

MEMORANDUM

To: Grants Uranium Phase 2 Project

From: Raymond Rodarte, Reclamation Spec. 3

Subject: Follow-up Inspection on the Grants Uranium Phase 2 Project

On January 19, 2000, I Raymond Rodarte completed a follow-up inspection for the Grants Uranium Phase 2 Project in Ambrosia Lake, New Mexico. This project was completed in May 3, 1993 and AMLB has only had 1 maintenance project out since the project was completed. Since we have had a dry winter this season I have noticed there has not been so much subsidence on shaft that have been filled or underground mine drifts. Most of the shafts and adits were inspected and they showed no subsidence or erosion. The Piedra Triste Mine area is beginning to look better as native weeds and grasses cover the unseeded ground material that was used to backfill this large mine. I recommend that we use some of the salvaged seed from past projects in the Piedra Triste area. I will be asking the Rancher if he could spread the seed if we can supply the materials for this coming June season, if he refuses then we might need to higher a Contractor.

The subsidence near the road driving up to Haystack has been filled up again by the Mckinley County Road Department for the second time in one year. This subsidence resulted from an underground mine drift or an exploration drill hole.

Mr. Marquez has approximately 50 head of cattle grazing on this property and has mentioned that he would appreciate that we seed the disturbed areas that have been backfilled from the last 2 project.

00900 - Addenda

APPLICATION FOR PAYMENT

FLAT TOP MAINTENANCE PROJECT
 San Matco, New Mexico
 EMNRD-MMD-97-521.06-071

Contract No. 96-8 Contractor Robert Lopez Billing No. 1 Billing Date 4/15/97 Terminate June 30, 1997

Billing represents work completed through (date) 4/15/97

ITEM NO.	MATERIAL OR WORK DESCRIPTION	ESTIMATED QUANTITY	CONTRACT	UNITS THIS AMOUNT	AMOUNTS THIS BILLING	UNITS PREVIOUS BILLING	AMOUNTS PREVIOUS BILLINGS	UNITS BILLINGS	AMOUNTS REMAINING
1.	Mobilization & Demolition (not to exceed 10% of total bid)	For the lump sum of	\$ 250.00						
2.	Mine Backfilling 400 cu. Yds.	For the lump sum of	\$ 2,500.00						
		Subtotal	\$ 2,750.00						
3.	GROSS RECEIPTS TAX = LOCAL RATE (5.75% through 12-31-96) x Subtotal		\$ 158.12						
TOTAL CONTRACT			\$ 2,908.12						

CERTIFICATION

I do hereby certify that the work described herein has been performed and that no previous payment for the Total Amount Due this Statement, as shown above, has been received.

By: [Signature]

Mining and Minerals Division Director

Date: April 28, 1997By: Robert Lopez

Contractor

Date: 4-17-97By: Raymond Padgett

AML Project Manager

Date: 4/19/97



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

MINING AND MINERALS DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-5970

Jennifer A. Salisbury
CABINET SECRETARY

Kathleen A. Garland
DIVISION DIRECTOR

April 18, 1997

MEMORANDUM

To: Kathleen Garland, Director - MMD

From: Raymond Rodarte, Project Manager - AML

Subject: Flat Top Maintenance Project, Project No: 97-521.06-071, First and Final Payment

On April 7, 1997 Robert Lopez (Contractor) was given notice to proceed on a Maintenance Project to be completed in San Mateo, New Mexico.

The Contractor mobilized on April 16, 1997 and completed the Flat Top Maintenance Project satisfactorily on April 17, 1997.

The total amount of backfill material used for backfilling the mine subsidence was a total of 400 cubic yards. Therefore, I recommend final payment.

Enclose is the original of the first and final application for payment totaling \$2,908.12, which includes gross receipts tax. I find the pay request to be reasonable and without mathematical error, please sign in the space provided on the application.

RRR/rrr
Attachments

xc: Construction Contracts (h), w/copy of attachments
Robert Evetts, w/copy of attachements



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

MINING AND MINERALS DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-5970

Jennifer A. Salisbury
CABINET SECRETARY

Kathleen A. Garland
DIVISION DIRECTOR

April 7, 1997

CERTIFIED MAIL # Z 062 024 802
RETURN RECEIPT REQUIRED

Mr. Robert Lopez, Owner
P.O. Box 456
Penasco, New Mexico 87553

RE: EMNRD-MMD-96-6 FLAT TOP URANIUM MINE MAINTENANCE
PROJECTS, SAN MATEO, NEW MEXICO

Dear Mr. Lopez:

This Notice to Proceed authorizes you to commence construction activities under the terms and conditions of Contract No. 97-521.06-071 for the Flat Top Uranium Mine Maintenance Projects, San Mateo, New Mexico. Upon receipt of this Notice, you shall mobilize to the project site and commence work within ten (10) working days. You must obtain any necessary permits before you begin work. Enclosed is one copy of the executed contract for the project.

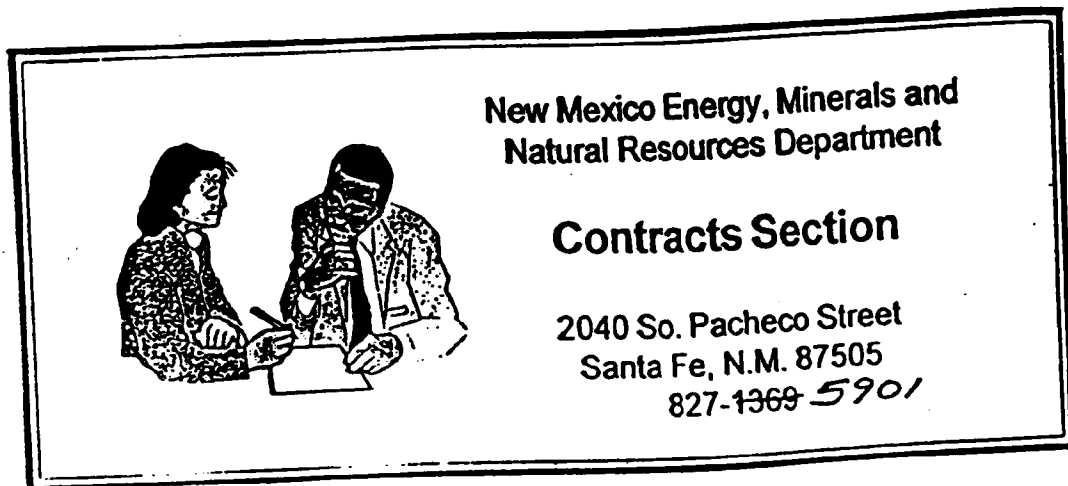
Sincerely,

Raymond R. Rodarte
Reclamation Spec. 3
Abandoned Mine Land Bureau
Mining and Minerals Division

Enclosure

cc: Construction Contracts (h)
Virginia Baca, Administrative Services Division
Robert M. Evetts, Program Manager

TO: Ray Rodarte / mmo DATE: 2/24/97
FROM: VIRGINIA BACA



- ☐ FOR YOUR APPROVAL, SIGNATURE AND RETURN.
- ☐ FOR YOUR INITIAL APPROVAL AND SIGNATURE.
- ☐ FOR YOUR FINAL APPROVAL AND SIGNATURE.
- ☐ ATTACHED CONTRACT IS READY FOR CONTRACTOR'S SIGNATURE AND TAXATION & REVENUE, IF APPLICABLE.
- ☐ ATTACHED IS/ARE THE APPROVED DFA ENCUMBRANCE DOCUMENT(S) FOR YOUR FILE(S)
- ☐ ATTACHED ARE 2 EXECUTED COPIES OF Contract Agreement CSC 97-521.06-071
SEND ONE TO THE CONTRACTOR(S) AND ISSUE THE NOTICE TO PROCEED, AND
THE OTHER COPY IS (COPIES ARE) FOR YOUR PROJECT FILE(S).

REMARKS:

Please send me a copy of "Notice
to Proceed" you send to Contractor
for my files

Thank You

STATE OF NEW MEXICO
GENERAL SERVICES DEPARTMENT
PURCHASING DIVISION

Page 2

CONTRACT**ARTICLE I - STATEMENT OF WORK**

Contract to provide services as indicated in specifications.

ARTICLE II - TERM

The term of this Contract will be as indicated in specifications

ARTICLE III - TERMINATION

This Contract may be terminated by either signing party upon written notice by either party to the other at least thirty (30) days in advance of the date of termination. Termination of this contract, however, shall not affect any outstanding orders.

ARTICLE IV - AMENDMENT

This Contract may be amended by mutual agreement of the NM State Purchasing Agent and the contractor upon written notice by either party to the other. An amendment to this Contract **SHALL NOT AFFECT ANY OUTSTANDING ORDERS** issued prior to the effective date of the amendment as mutually agreed upon, and as published by the NM State Purchasing Agent. Amendments affecting price adjustments and/or extension of contract expiration are not allowed unless specifically provided for in bid and contract documents.

ARTICLE V - PRICE SCHEDULE

Price(s) as listed are firm.

ARTICLE VI - INDEMNITY CLAUSE

Contractor shall indemnify and hold harmless the State, its officers and employees, against liability, claims, damages, losses or expenses arising out of bodily injury to persons or damage to property caused by, or resulting from, contractor's and/or its employees, own negligent act(s) or omissions(s) while contractor, and/or its employees, perform(s) or fails to perform its obligations and duties under the terms and conditions of this agreement. This save harmless and indemnification clause is subject to the immunities, provisions, and limitations of the tort claims act (41-4-1, et seq., N.M.S.A. 1978 comp.) and section 57-7-1 N.M.S.A. 1978 comp. and any amendments thereto.

It is specifically agreed between the parties executing this agreement that it is not intended by any of the provisions of any part of the agreement to create the public or any member thereof a third party beneficiary or to authorize anyone not a party to the agreement to maintain a suit(s) for wrongful death(s) bodily and/or personal injury(ies) to person(s), damage(s) to property(ies) and/or any other claims(s) whatsoever pursuant to the provisions of this agreement.

Vendor shall provide all insurance necessary to employees on the work site, including but not limited to workman's compensation.

STATE OF NEW MEXICO
GENERAL SERVICES DEPARTMENT
PURCHASING DIVISION

70-521-06-05527
PAGE 3

ITEM * QTY * UNIT * ARTICLE * UNIT * TOTAL
* * * AND DESCRIPTION * PRICE * PRICE

0001 1.0 JOB CONSTRUCTION MAINTENACE ON THE GRANTS
PHASE II PROJECT PER ATTACHED CONTRACT

2,908.120000 (1)

**** 1 ITEM(S), 1 AWARDED

STATE OF NEW MEXICO
GENERAL SERVICES DEPARTMENT

CONTRACT VENDOR(S)

* CONTRACT *

(1)-5387537 - -
ROBERT LOPEZ EXCAVATING
PO BOX 456

FENASCO

NM 87553-0000

TAX-ID NUMBER:

CONSTRUCTION MAINTENANCE , GRANTS
PHASE II PROJECT

CONTRACT NO: 70-521-06-05527
COMMODITY 05403 05411
CODE(S):

BUYER: RAMON MONTOYA
(505) 827-0487

SEALED BID OPENING * CONTRACT
STATE PURCHASING AGENT'S OFFICE
DATE: 00/00/00

PAYMENT TERMS: NET 30 DAYS
FOB: JOBSITE
DELIVERY: WITHIN 25 DAYS ARO

SHIP TO:
ENERGY, MINERALS AND NATURAL
RESOURCES DEPT.
2040 S. PACHECO
SANTA FE NM 87503-0000

THIS CONTRACT IS MADE SUBJECT
TO THE TERMS AND CONDITIONS SHOWN
ON THE REVERSE SIDE OF THIS PAGE.

INVOICE/BILL TO:
SAME AS SHIP TO

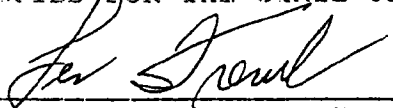
00000-0000

THE TERM OF THIS CONTRACT SHALL BE FEB 17, 1997 THRU JUN 30, 1997.

CONTACT PERSON FOR DELIVERY INSTRUCTIONS OF ITEM(S) ON THIS
CONTRACT: VIRGINIA BACA 505-827-5901

FEB 1997
Received
Administration Services
Division

ACCEPTED FOR THE STATE OF NEW MEXICO


NEW MEXICO STATE PURCHASING AGENT

DATE: 02/06/97

PURCHASING DIVISION
JOSEPH MONTOYA BLDG, RM. 2016
1100 ST. FRANCIS DR. 87505
P.O. BOX 26110
SANTA FE, NEW MEXICO 87502-0110

TERMS AND CONDITIONS UNLESS OTHERWISE SPECIFIED

1. **GENERAL:** When the State Purchasing Agent issues a purchase document in response to the Vendor's Bid a binding contract is created.

2. **VARIATION IN QUALITY:** No variation in the quantity of any item called for by this order will be accepted unless such variation has been caused by conditions of loading, shipping, packing or allowances in manufacturing process, and then only to the extent, if any, specified elsewhere in this order.

3. **ASSIGNMENT:**

A. Neither the order, nor any interest therein, nor claim thereunder, shall be assigned or transferred by the Vendor, except as set forth in subparagraph 3B below or as expressly authorized in writing by the STATE PURCHASING AGENT'S OFFICE. No such assignment or transfer shall relieve the Vendor from the obligations and liabilities under this order.

B. Vendor agrees that any and all claims for overcharge resulting from antitrust violations which are borne by the State as to goods, services, and materials purchased in connection with this bid are hereby assigned to the State.

4. **STATE FURNISHED PROPERTY:** State furnished property shall be returned to the State upon request in the same condition as received except for ordinary wear, tear and modifications ordered hereunder.

5. **DISCOUNTS:** Prompt payment discounts will not be considered in computing the low bid. Discounts for payment within 20 days will be considered after the award of the contract. Discounted time will be computed from the date of receipt of the merchandise or invoice, whichever is later.

6. **INSPECTION** Final inspection and acceptance will be made at the destination. Supplies rejected at the destination for non-conformance with specifications shall be removed, at the Vendor's risk and expense, promptly after notice of rejection.

7. **INSPECTION OF PLANT:** The State Purchasing Agent may inspect, at any reasonable time, the part of the contractors, or any subcontractors plant or place or business, which is related to the performance of this contract.

8. **COMMERCIAL WARRANTY:** The Vendor agrees that the supplies or services furnished under this order shall be covered by the most favorable commercial warranties the Vendor gives to any customer for such supplies or services, and that the rights and remedies provided herein shall extend to the State and are in addition to and do not limit any rights afforded to the State by any other clause of this order. Vendor agrees not to disclaim warranties of fitness for a particular purpose or merchantability.

9. **TAXES:** The unit price shall exclude all State taxes.

10. **PACKING, SHIPPING AND INVOICING:**

A. The State's purchase document number and the Vendor's name, user's name and location shall be shown on each packing and delivery ticket, package, bill of lading and other correspondence in connection with the shipment. The user's count will be accepted by the Vendor as final and conclusive on all shipments not accompanied by a packing ticket.

B. The Vendor's invoice shall be submitted in triplicate, duly certified and shall contain the following information: order number, description of supplies or services, quantities, unit prices and extended totals. Separate invoices shall be rendered for each and every complete shipment.

C. Invoice must be submitted to the using agency and NOT THE STATE PURCHASING AGENT.

11. **DEFAULT:** The State reserves the right to cancel all or any part of this order without cost to the State, if the Vendor fails to meet the provisions of this order and, except as otherwise provided herein, to hold the Vendor liable for any excess cost occasioned by the State due to the Vendor's default. The Vendor shall not be liable for any excess costs if failure to perform the order arises out of causes beyond the control and without the fault or negligence of the Vendor, such causes include, but not restricted to, acts of God or of the public enemy, acts of the State or of the Federal Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather and defaults of subcontractors due to any of the above, unless the State shall determine that the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Vendor to meet the required delivery schedule. The rights and remedies of the State provided in this paragraph shall not be exclusive and are in addition to any other rights now being provided by law or under this order.

12. **NON-COLLUSION:** In signing this bid, the Vendor certifies he/she has not, either directly or indirectly, entered into action in restraint of free competitive bidding in connection with this proposal submitted to the State Purchasing Agent.

13. **NON-DISCRIMINATION:** Vendors doing business with the State of New Mexico must be in compliance with the Federal Civil Rights Act of 1964 and Title VII of that Act, Rev., 1979.

14. **THE PROCUREMENT CODE:** Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil and criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for bribes, gratuities and kickbacks.

15. All bid items are to be NEW and of most current production, unless otherwise specified.

STATE OF NEW MEXICO
GENERAL SERVICES DEPARTMENT
PURCHASING DIVISION

Page 2

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This Contract may be terminated by either signing party upon written notice by either party to the other at least thirty (30) days in advance of the date of termination. Termination of this contract, however, shall not affect any outstanding orders.

ARTICLE IV - AMENDMENT

This Contract may be amended by mutual agreement of the NM State Purchasing Agent and the contractor upon written notice by either party to the other. An amendment to this Contract **SHALL NOT AFFECT ANY OUTSTANDING ORDERS** issued prior to the effective date of the amendment as mutually agreed upon, and as published by the NM State Purchasing Agent. Amendments affecting price adjustments and/or extension of contract expiration are not allowed unless specifically provided for in bid and contract documents.

ARTICLE V - PRICE SCHEDULE

Price(s) as listed are firm.

ARTICLE VI - INDEMNITY CLAUSE

Contractor shall indemnify and hold harmless the State, its officers and employees, against liability, claims, damages, losses or expenses arising out of bodily injury to persons or damage to property caused by, or resulting from, contractor's and/or its employees, own negligent act(s) or omissions(s) while contractor, and/or its employees, perform(s) or fails to perform its obligations and duties under the terms and conditions of this agreement. This save harmless and indemnification clause is subject to the immunities, provisions, and limitations of the tort claims act (41-4-1, et seq., N.M.S.A. 1978 comp.) and section 57-7-1 N.M.S.A. 1978 comp. and any amendments thereto.

It is specifically agreed between the parties executing this agreement that it is not intended by any of the provisions of any part of the agreement to create the public or any member thereof a third party beneficiary or to authorize anyone not a party to the agreement to maintain a suit(s) for wrongful death(s) bodily and/or personal injury(ies) to person(s), damage(s) to property(ies) and/or any other claims(s) whatsoever pursuant to the provisions of this agreement.

Vendor shall provide all insurance necessary to employees on the work site, including but not limited to workman's compensation.

STATE OF NEW MEXICO
GENERAL SERVICES DEPARTMENT
PURCHASING DIVISION

70-521-06-05527
PAGE 3

ITEM * QTY * UNIT * ARTICLE * UNIT * TOTAL
* * * AND DESCRIPTION * PRICE * PRICE

0001 1.0 JOB CONSTRUCTION MAINTENACE ON THE GRANTS
PHASE II PROJECT PER ATTACHED CONTRACT

2,908.120000 (1)

**** 1 ITEM(S), 1 AWARDED

STATE OF NEW MEXICO
GENERAL SERVICES DEPARTMENT

CONTRACT VENDOR(S)

* C O N T R A C T *

(1)-5387537 - -
ROBERT LOPEZ EXCAVATING
PO BOX 456

FENASCO

NM 87553-0000

TAX-ID NUMBER:

CONSTRUCTION MAINTENANCE , GRANTS
PHASE II PROJECT

CONTRACT NO: 70-521-06-05527
COMMODITY 05403 05411
CODE(S):

BUYER: RAMON MONTOYA
(505) 827-0487

SEALED BID OPENING * CONTRACT
STATE PURCHASING AGENT'S OFFICE
DATE: 00/00/00

PAYMENT TERMS: NET 30 DAYS
FOB: JOBSITE
DELIVERY: WITHIN 25 DAYS ARO

SHIP TO:
ENERGY, MINERALS AND NATURAL
RESOURCES DEPT.
2040 S. PACHECO
SANTA FE NM 87503-0000

THIS CONTRACT IS MADE SUBJECT
TO THE TERMS AND CONDITIONS SHOWN
ON THE REVERSE SIDE OF THIS PAGE.

INVOICE/BILL TO:
SAME AS SHIP TO

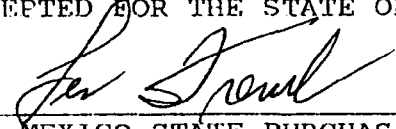
00000-0000

THE TERM OF THIS CONTRACT SHALL BE FEB 17, 1997 THRU JUN 30, 1997.

CONTACT PERSON FOR DELIVERY INSTRUCTIONS OF ITEM(S) ON THIS
CONTRACT: VIRGINIA BACA 505-827-5901

FEB 1997
Received
Administrative Services
Division

ACCEPTED FOR THE STATE OF NEW MEXICO



NEW MEXICO STATE PURCHASING AGENT

DATE: 02/06/97

PURCHASING DIVISION
JOSEPH MONTOYA BLDG, RM. 2016
1100 ST. FRANCIS DR. 87505
P.O. BOX 26110
SANTA FE, NEW MEXICO 87502-0110

STATE OF NEW MEXICO
GENERAL SERVICES DEPARTMENT
PURCHASING DIVISION

GSLPD 002-A (Rev. 8/88)

TERMS AND CONDITIONS UNLESS OTHERWISE SPECIFIED

1. **GENERAL:** When the State Purchasing Agent issues a purchase document in response to the Vendor's Bid a binding contract is created.

2. **VARIATION IN QUALITY:** No variation in the quantity of any item called for by this order will be accepted unless such variation has been caused by conditions of loading, shipping, packing or allowances in manufacturing process, and then only to the extent, if any, specified elsewhere in this order.

3. **ASSIGNMENT:**

A. Neither the order, nor any interest therein, nor claim thereunder, shall be assigned or transferred by the Vendor, except as set forth in subparagraph 3B below or as expressly authorized in writing by the STATE PURCHASING AGENT'S OFFICE. No such assignment or transfer shall relieve the Vendor from the obligations and liabilities under this order.

B. Vendor agrees that any and all claims for overcharge resulting from antitrust violations which are borne by the State as to goods, services, and materials purchased in connection with this bid are hereby assigned to the State.

4. **STATE FURNISHED PROPERTY:** State furnished property shall be returned to the State upon request in the same condition as received except for ordinary wear, tear and modifications ordered hereunder.

5. **DISCOUNTS:** Prompt payment discounts will not be considered in computing the low bid. Discounts for payment within 20 days will be considered after the award of the contract. Discounted time will be computed from the date of receipt of the merchandise or invoice, whichever is later.

6. **INSPECTION** Final inspection and acceptance will be made at the destination. Supplies rejected at the destination for non-conformance with specifications shall be removed, at the Vendor's risk and expense, promptly after notice of rejection.

7. **INSPECTION OF PLANT:** The State Purchasing Agent may inspect, at any reasonable time, the part of the contractors, or any subcontractors plant or place or business, which is related to the performance of this contract.

8. **COMMERCIAL WARRANTY:** The Vendor agrees that the supplies or services furnished under this order shall be covered by the most favorable commercial warranties the Vendor gives to any customer for such supplies or services, and that the rights and remedies provided herein shall extend to the State and are in addition to and do not limit any rights afforded to the State by any other clause of this order. Vendor agrees not to disclaim warranties of fitness for a particular purpose or merchantability.

9. **TAXES:** The unit price shall exclude all State taxes.

10. **PACKING, SHIPPING AND INVOICING:**

A. The State's purchase document number and the Vendor's name, user's name and location shall be shown on each packing and delivery ticket, package, bill of lading and other correspondence in connection with the shipment. The user's count will be accepted by the Vendor as final and conclusive on all shipments not accompanied by a packing ticket.

B. The Vendor's invoice shall be submitted in triplicate, duly certified and shall contain the following information: order number, description of supplies or services, quantities, unit prices and extended totals. Separate invoices shall be rendered for each and every complete shipment.

C. Invoice must be submitted to the using agency and NOT THE STATE PURCHASING AGENT.

11. **DEFAULT:** The State reserves the right to cancel all or any part of this order without cost to the State, if the Vendor fails to meet the provisions of this order and, except as otherwise provided herein, to hold the Vendor liable for any excess cost occasioned by the State due to the Vendor's default. The Vendor shall not be liable for any excess costs if failure to perform the order arises out of causes beyond the control and without the fault or negligence of the Vendor, such causes include, but not restricted to, acts of God or of the public enemy, acts of the State or of the Federal Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather and defaults of subcontractors due to any of the above, unless the State shall determine that the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Vendor to meet the required delivery schedule. The rights and remedies of the State provided in this paragraph shall not be exclusive and are in addition to any other rights now being provided by law or under this order.

12. **NON-COLLUSION:** In signing this bid, the Vendor certifies he/she has not, either directly or indirectly, entered into action in restraint of free competitive bidding in connection with this proposal submitted to the State Purchasing Agent.

13. **NON-DISCRIMINATION:** Vendors doing business with the State of New Mexico must be in compliance with the Federal Civil Rights Act of 1964 and Title VII of that Act, Rev., 1979.

14. **THE PROCUREMENT CODE:** Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil and criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for bribes, gratuities and kickbacks.

15. All bid items are to be NEW and of most current production, unless otherwise specified.

VENDOR CODE **585193200**

VENDOR NAME AND ORDER ADDRESS

DBA LOPEZ, ROBERT
DBA LOPEZ EXCAVATING
P.O. BOX 456
PENASCO, NM 87553

LO0012

STATE OF
NEW MEXICO
PURCHASE DOCUMENT

BUDGET FY **97** DATE **01/22/97** PAGE **1 OF 1**

AGENCY CODE **521** DOCUMENT NUMBER **97-199-005527**

TERMS DELIVERY DATE / / FOB

S H I P T O

Energy, Minerals and Natural Resources Dept.
2040 S. Pacheco
Santa Fe, NM 87503

S I L L T O

Same

AGENCY CONTACT

Virginia Baca

PHONE NUMBER

(505) 827-5901

☐ PURCHASE REQUISITION
(Bids must be requested for items over \$500.00)

RECOMMENDED SOURCE & SPECIAL REMARKS:

☐ ESTABLISH ☐ RENEWAL NO.

FUND	AGCY	ORG	OBJECT	AMOUNT	FOR AGENCY USE
01	199	521	0600 0522	2908.12	0522 064J 2908.12
TOTAL				2908.12	

☒ CONTRACT, PRICE AGREEMENT, PURCHASE ORDER
OTHER THAN PROFESSIONAL SERVICE CONTRACTS:
(Approved vendors must be used for items under contract)

C/PA/PO# **SPD CSC97-521.06-071** EXPIRES: **06/30/97**

☐ DIRECT PURCHASE ORDER
(only valid for purchases \$500.00 and under)

☐ EXEMPT FROM THE NM PROCUREMENT CODE
Pursuant to Section _____ NMSA, 1978

☐ EXCLUDED FROM PROCUREMENT THROUGH STATE PURCHASING
Pursuant to Section _____ NMSA, 1978

☐ FOR ENCUMBERING PURPOSES ONLY
Reason: _____

AGENCY APPROVAL - I certify that the proposed purchase represented by this document is authorized by and is made in accordance with all State (and if applicable, Federal) legislation, rules and regulations. I further certify that adequate unencumbered cash and budget expenditure authority exists for the proposed purchase and all other outstanding purchase commitments and accounts payable.

AGENCY AUTHORIZED SIGNATURE

Joseph F. Moulton Jr.

TITLE

DATE

01/22/97

APPROVAL 1 DATE APPROVAL 2 DATE

QUANTITY	UNIT	COMMODITY CODE	ACCT LN	ARTICLE AND DESCRIPTION	UNIT COST	TOTAL COST
01	1	ea.		Encumber funds for Small Purchase Construction Services Agreement #97-521.06-071 with Robert Lopez (Lopez Excavating) for construction maintenance on the Grants Phase II project. Expiration Date: 06/30/97	2908.12	2908.12
TOTAL						2908.12

SPD - 101A (05/96) COPY 3 DISTRIBUTION: AGENCY COPY 2

RECEIVED
FEB 11 1997
FUNDING UNIT/HUL DIVISION

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT**SMALL PURCHASE
CONSTRUCTION SERVICES CONTRACT**

THIS AGREEMENT is made and entered into by and between the State of New Mexico Energy, Minerals, and Natural Resources Department, hereinafter referred to as "EMNRD", and Robert Lopez, hereinafter referred to as the "Contractor". Supervision and coordination of work under this Agreement shall be performed by and through the Director of the Mining and Minerals Division, hereinafter referred to as "MMD", of EMNRD.

IT IS MUTUALLY AGREED BETWEEN THE PARTIES:**I. Scope of Work.**

- A. The Contractor shall backfill one large subsidence feature for the Flat Top Uranium Mine Maintenance Projects, San Mateo, New Mexico. See Fig. 2

B. Description

The project area is located on Township 13 North, Range 9 West, SE1/4 of Section 30.

C. Access

Right of Entry through private land and Bureau of Land Management property.

D. Proposed Scope of Work

The Flat Top Mine Safeguard Maintenance Project will consist of mechanically backfilling one large subsidence hole with approximately 400 cubic yards of backfill material from nearby mine waste dumps. The area backfilled will also receive a 6 foot mound of topdressing over the final area backfilled to compensate for any additional subsidence the topdressing material is included in part of the 400 yards of backfill material.

There are two mine waste piles that will be used for backfill material. The #1 east

waste pile is approximately 1,000 feet from the subsidence hole which will be used for the first 70% of backfill material. The #2 west barrow area is approximately 2,000 feet from the subsidence and the remaining 30% of backfill material will come from this pile.

This project requires construction work around and over hazardous mine shafts and other underground mine drifts, which may be open to the surface or hidden from view by trash, debris or thin and unstable layers of surface materials or rock. The Contractor shall be responsible for thoroughly investigating the site conditions for safety.

- E. EMNRD shall have the sole authority to approve any changes to the Scope of Work and the Specifications and to approve the Contractor's final work product.
- F. Upon receiving the written Notice to Proceed via certified mail, the Contractor shall mobilize to the site and commence work within ten (10) calendar days and complete project within 25 calendar days after site mobilization.
- G. **BEFORE ANY WORK IS INITIATED**, the Contractor shall give notice to all utility companies that provide service to the contract site and inform the utility companies of the work to be performed.

II. Compensation.

- A. The total amount of this construction contract is two thousand nine hundred and eight dollars and 18/100 cents, (\$2,908.18), which includes the amount of the accepted bid plus the appropriate New Mexico Gross Receipts Tax.
- B. The New Mexico Gross Receipts Tax levied on the amounts payable under this Agreement shall be paid by the Contractor out of the sum set forth in Paragraph II.A above.
- C. Payment shall be made upon 100 percent completion and AML's final inspection of the project sites.

III. Term.

THIS AGREEMENT SHALL NOT BECOME EFFECTIVE UNTIL APPROVED IN WRITING BY EMNRD AND STAMPED BY THE PURCHASING DIVISION. This Agreement shall terminate on June 30, 1997 unless terminated pursuant to Paragraphs IV, IX, or XXI infra.

IV. Termination.

A. 1. EMNRD may, by written order, terminate this Agreement or any portion thereof after determining that, for reasons beyond either EMNRD's or the Contractor's control, the Contractor is prevented from proceeding with or completing the work as originally contracted for, and that termination would therefore be in the public interest. Such reasons for termination may include, but need not be limited to, executive orders of the President relating to prosecution of war or national defense, a national emergency which creates a serious shortage of materials, orders from duly constituted authorities relating to energy conservation, and restraining orders or injunctions obtained by third-party citizen action resulting from national or local environmental protection laws or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor.

2. If EMNRD orders termination of this Agreement effective on a certain date, payment will be made for the actual number of units or items of work completed at the contract unit price, or as mutually agreed for items of work partially completed.

3. Acceptable materials, obtained by the Contractor for the work but which have not been incorporated therein, may, at the option of EMNRD, be purchased from the Contractor at actual cost, delivered to a prescribed location, or otherwise disposed of as mutually agreed.

4. After receipt of notice of termination pursuant to this section IV.A. from EMNRD, the Contractor may submit a claim for additional damages or costs not covered above or elsewhere in the Specifications. Such claim may include such cost items as reasonable idle equipment time, mobilization efforts, bidding and project investigative costs, overhead expenses attributable to the project terminated, legal and accounting charges involved in claim preparation, subcontractor costs not otherwise paid for, actual idle labor costs if work is stopped in advance of termination date, and guaranteed payments for private land usage as part of the original contract. In no event, however, will loss of anticipated profits be considered as part of any settlement.

5. The Contractor agrees to make all cost records available to the extent necessary to determine the validity and amount of each item claimed.

6. Termination of a contract or portion thereof shall not relieve the Contractor of any contractual responsibilities for the work completed, nor shall it relieve the surety of its obligation for and concerning any just claim arising out of the work performed.

B. 1. If the Contractor:

a. fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. fails to perform the work with sufficient workers and equipment or with sufficient materials to assure the prompt completion of said work, or

c. performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. discontinues the prosecution of the work, or

e. fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. becomes insolvent or is declared bankrupt or commits any acts of bankruptcy or insolvency, or

g. allows a final judgment, in a suit filed in connection with this contract, to stand against the Contractor unsatisfied for a period of thirty (30) working days, or

h. makes an assignment, in connection with this contract, for the benefit of creditors, or

i. fails to carry on the work in an acceptable manner,

then EMNRD will give notice in writing to Contractor and the surety of such delay, neglect, or default, and will specify those provisions which have been violated and the corrective measures to be taken.

2. If the Contractor or surety, within a period of ten (10) working days after such notice, does not proceed in accordance therewith, then EMNRD will, upon written notification from EMNRD of the fact of such delay, neglect, or default, and of the Contractor's failure to comply with such notice, have full power and authority without violating this Agreement to take possession of the premises and of all materials thereon and finish the work by whatever method it may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished.

V. Status of the Contractor.

The Contractor and its agents and employees are independent Contractors performing construction services for EMNRD and are not employees of the State of New Mexico. The Contractor and its agents and employees shall not accrue leave, retirement, insurance, bonding, use of state vehicles, or any other benefits afforded to employees of the State of New Mexico as a result of this Agreement.

VI. Assignment.

The Contractor shall not assign or transfer any interest in this Agreement or assign any claims for money due or to become due under this Agreement without the prior written approval of EMNRD.

VII. Subcontracting.

The Contractor shall comply fully with the provisions of the New Mexico Subcontractor's Fair Practices Act, Sections 13-4-31 through 13-4-43, NMSA 1978. The Contractor shall not subcontract any portion of the services to be performed under this Agreement or obligate itself in any manner to any third party, with respect to any rights or responsibilities under this Agreement, without the prior written approval of EMNRD.

VIII. Records and Audit.

The Contractor shall maintain detailed time records which indicate the date, time, and nature of services rendered. These records shall be subject to inspection by EMNRD, the Department of Finance and Administration (DFA), the State Auditor, the U.S. Interior Department, and the Comptroller General of the United States for three (3) years after final payment has been made and all matters relating to performance under this Agreement have been settled. The Contractor further agrees to include in all subcontracts hereunder the same right of inspection and audit against all subcontractors. EMNRD shall have the right to audit billings both before and after payment. Payment under this Agreement shall not foreclose the right of EMNRD to recover excessive, illegal, or incorrect payments. The periods of inspection and audit are for records which relate to litigation or settlement of claims arising out of performance of this Agreement for which exception is under consideration by the federal funding agency or any authorized representative and shall continue until all potential litigation, appeals, claims, or exceptions have expired or been resolved.

IX. Appropriations.

The terms of this Agreement are contingent upon sufficient appropriations and authorization being made by the Legislature of New Mexico, the Federal Congress, and the U.S. Interior Department for the performance of this Agreement. If sufficient appropriations and authorization are not made, this Agreement shall terminate upon written notice being given by EMNRD to the Contractor. EMNRD's decision as to whether sufficient appropriations are available shall be accepted by the Contractor and shall be final.

X. Release.

The Contractor, upon final payment of the amount due under this Agreement, releases EMNRD, its officers and employees, and the State of New Mexico from all liabilities, claims, and

obligations whatsoever arising from or under this Agreement. The Contractor agrees not to purport to bind the state of New Mexico to any obligation not assumed herein by the state of New Mexico unless the Contractor has express written authority to do so, and then only within the strict limits of that authority.

XI. Confidentiality.

Any confidential information provided to or developed by the Contractor in the performance of this Agreement shall be kept confidential and shall not be made available to any individual or organization by the Contractor without the prior written approval of EMNRD.

XII. Amendment.

This Agreement shall not be altered, changed, or amended except by instrument in writing executed by the parties hereto.

XIII. Scope of Agreement.

This Agreement incorporates all of the agreements, covenants, and understandings between the parties hereto concerning the subject matter hereof, and all such agreements, covenants, and understandings have been merged into this written Agreement. No prior agreements or understandings, verbal or otherwise, of the parties or their agents shall be valid or enforceable unless embodied in this Agreement.

XIV. Civil and Criminal Liability Notice.

The Procurement Code, Sections 13-1-28 through 13-1-199, NMSA 1978, imposes civil and criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for illegal bribes, gratuities, and kickbacks.

XV. Equal Opportunity Compliance.

The Contractor agrees to abide by all Federal and State laws and rules and regulations, and executive orders of the Governor of the State of New Mexico, pertaining to equal employment opportunity. In accordance with all such laws and rules and regulations, and executive orders of the Governor of the State of New Mexico, the Contractor agrees to assure that no person in the United States shall, on the grounds of race, color, national origin, sex, sexual preference, age, or handicap, be excluded from employment with or participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity performed under this Agreement. If the Contractor is found to be not in compliance with these requirements during the life of this Agreement, the Contractor agrees to take appropriate steps to correct those deficiencies.

XVI. Applicable Law.

This Agreement shall be governed by the laws of the State of New Mexico.

XVII. Waiver.

No waiver of any of the terms or conditions of this Agreement shall be valid or binding unless it is in writing and signed by the party having granted the waiver.

XVIII. Notices.

A. Unless EMNRD shall specify otherwise in writing, notices and all other matters concerning the work to be performed hereunder shall be addressed to EMNRD as follows:

Contract Monitor: Kathleen Garland, Director

Contracting Division: Mining and Minerals Division
Energy, Minerals, and Natural Resources Department
State of New Mexico
2040 South Pacheco Street
Santa Fe, New Mexico 87505-5472
505/827-5970

B. Unless the Contractor shall specify otherwise in writing, notices and all other matters concerning the work to be performed hereunder shall be addressed to the Contractor as follows:

Robert Lopez
P.O. Box 456
Penasco, New Mexico 87533

C. Any and all notices or other communications required or permitted by this Agreement or by law to be served or given to either party hereto by the other party hereto shall be in writing and shall be deemed duly served and given upon actual receipt by or three (3) working days subsequent to certified mailing to the party to whom it is directed.

XIX. Indemnification.

The Contractor shall indemnify and forever hold and save EMNRD, the State of New Mexico, its officers, and employees harmless against any and all suits, causes of action, claims, liabilities, damages, losses, and attorney's fees and all other expenses of any kind from any source which may arise out of this Agreement or any amendment hereto if caused by the tortious act or omission of the Contractor, its officers, employees, servants, or agents. Nothing in this

Agreement shall be construed to waive or limit any defense at law to which EMNRD is entitled.

XX. Duty to Insure.

A. In respect solely to the work occasioned by this Agreement, the Contractor shall obtain and maintain at all times during the term of this Agreement, and any extension thereof, insurance of the kind and in the amounts herein specified. Such insurance shall be provided by insurance companies authorized to do business in New Mexico and shall name the "State of New Mexico, EMNRD, MMD, and its agents and employees thereof" as either additional insured, co-insured, or principal beneficiary.

1. General Liability. Bodily injury liability and property damage liability insurance in the following minimum amounts: five hundred thousand dollars (\$500,000.00) for damages to or destruction of property arising out of a single occurrence; one million dollars (\$1,000,000.00) to any person for any number of claims arising out of a single occurrence for all damages other than property damages, and one million fifty thousand dollars (\$1,000,000.00) for all claims arising out of a single occurrence.

2. Automobile Liability. Automobile liability insurance covering the ownership, operation, and maintenance of owned, non-owned, and hired vehicles, in the following amounts:

Bodily injury liability --
\$700,000.00 each person
\$1,000,000.00 each occurrence;

Property damage liability--
\$1,000,000.00 each occurrence.

3. Workers' Compensation. The Contractor shall comply fully with the provisions of the New Mexico Workers' Compensation Act, Sections 52-1-1 through 52-1-70, NMSA 1978.

B. The Contractor shall furnish EMNRD with written evidence, in the form of a Certificate of Insurance, in a format acceptable to EMNRD, of the insurance coverage required by paragraph XX.A, including copies of all policies, prior to commencing work under this Agreement (see example on Page 13). The insurance coverage shall not be changed, canceled, or allowed to lapse without giving EMNRD thirty (30) working days prior written notice.

XXI. Disputes.

Any dispute, other than the Contractor's acts set forth in IV B, concerning a question of fact arising under this Agreement, not disposed of by agreement, shall be decided by the Director

of the Mining and Minerals Division, who shall reduce a decision to writing and furnish a signed copy to the Contractor. Such decision shall be final and conclusive unless, within thirty (30) calendar days from the date of notification by certified mail thereof, the Contractor mails or otherwise furnishes to the Division Director, a written appeal, addressed to the Secretary of the Energy, Minerals and Natural Resources Department. The Contractor shall be afforded an opportunity to be heard and to offer evidence. The decision of the Secretary of the Energy, Minerals and Natural Resources Department or the authorized representative thereof, shall be final and conclusive unless fraudulent, or capricious, or arbitrary, or not supported by substantial evidence. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Agreement and in accordance with the Division Director's decision.

XXII. Attorney's Fees and Costs.

If the Contractor is found by a court of competent jurisdiction to have breached this Agreement, or any amendments hereto, or to have committed any tortious act relating to the scope of this Agreement, the State of New Mexico may recover from the Contractor actual attorney's fees and costs in connection with litigation brought to obtain such judicial determination or in which EMNRD is otherwise obliged to undertake legal action.

XXIII. Suspension of Work.

A Suspension of Work Notice may be issued by the Project Manager if he has any reasonable basis to believe that any action of the Contractor is contrary to the intent of this Agreement or if any health or safety standard is violated after verbal or written notice to cease such activities has gone unheeded. No work performed after documentation of issuance of a Suspension of Work Notice shall be eligible for payment while such notice is in effect. No work shall proceed until such notice is vacated by the MMD Director.

XXIV. Compliance with Minimum Wage Rate Decision.

Since the construction cost is less than \$20,000, this Agreement is outside the scope of the Public Minimum Wage Act, Sections 13-4-11, et seq., NMSA 1978.

XXV. Required Bond for Public Works Contractor.

Due to the remoteness and small size of this project the bonding requirements will be waived.

XXVI. Preference for Use of New Mexico Materials.

This Agreement is within the scope of Section 13-4-5, NMSA 1978. A preference shall be given by the Contractor and any subcontractor to materials produced, grown, processed, or manufactured in New Mexico by residents of New Mexico.

XXVII. Liquidated Damages.

It is mutually agreed by the parties hereto that time for the performance of the Agreement is of the essence. Should the Contractor fail to perform the entire project within the specified time, the Contractor agrees to the charge of Three Hundred Dollars (\$300.00) per calendar day of liquidated damages representing inconvenience and monetary damage to the general public. Damages shall commence on the calendar day following the last day for performance of work under the Agreement. The Contractor stipulates that EMNRD may withhold additional payments under the Agreement or attach the performance bond to cover the liquidated damages set forth above. Liquidated damages shall continue until notice of satisfactory completion is forwarded by the Project Manager to the Project Engineer.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written below.

FOR:

**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL
RESOURCES DEPARTMENT**

By: [Signature]
(Authorized Representative/Title)

Date: 1/21/97

FOR:

ROBERT LOPEZ

By: Robert Lopez owner.
(Authorized Representative/Title)

Date: 1-11-97

The records of the Taxation and Revenue Department reflect that the Contractor is registered with the Taxation and Revenue Department of the State of New Mexico to pay gross receipts and compensating taxes.

FOR:

**STATE OF NEW MEXICO
TAXATION AND REVENUE
DEPARTMENT**

NM I.D. NO.: 02-307229-00-6

By: 
(Authorized Representative/Title)

Date: 1/7/97

ACORD CERTIFICATE OF LIABILITY INSURANCEOP ID MB
LOPEZ-2DATE (MM/DD/YY)
10/24/96

PRODUCER
E & S Brokerage Services, Inc.
5808 McLeod N.E., Suite L
Post Office Box 90365
Albuquerque NM 87199-0365

RECEIVED

OCT 28 1996

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION
ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE
HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR
ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

E & S Brokerage Services, Inc.
Phone No. 505-889-9111 Fax No. 505-889-9353
INSURED

MINING & MINERALS DIV.

COMPANIES AFFORDING COVERAGE

A Penn-America Insurance Company

COMPANY
BCOMPANY
CCOMPANY
D

Robert Lopez
P.O. Box 456
Penasco NM 87553

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD
INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS
CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS,
EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY	PAC1033523	10/24/96	10/24/97	GENERAL AGGREGATE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				PRODUCTS - COM/PROP AGG \$ 1,000,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				PERSONAL & ADV INJURY \$ 1,000,000
	<input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE \$ 1,000,000
					FIRE DAMAGE (Any one fire) \$ 50,000
					MED EXP (Any one person) \$ 5,000
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT \$
	<input type="checkbox"/> ANY AUTO				PERSONAL INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS				PERSONAL INJURY (Per accident) \$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE \$
	<input type="checkbox"/> HIRED AUTOS				PROPERTY DAMAGE \$
	<input type="checkbox"/> NON OWNED AUTOS				
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT \$
	<input type="checkbox"/> ANY AUTO				OTHER THAN AUTO ONLY \$
					EACH ACCIDENT \$
					AGGREGATE \$
	EXCESS LIABILITY				EACH OCCURRENCE \$
	<input type="checkbox"/> UMBRELLA FORM				AGGREGATE \$
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM				\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				TWO STATE FORTY LIMITS FORTY LIMITS
	<input type="checkbox"/> THE PROPRIETOR				EL EACH ACCIDENT \$
	<input type="checkbox"/> PARTNER/SEVERE INJURY				EL DISEASE - POLICY LIMIT \$
	<input type="checkbox"/> OFFICERS ARE <input type="checkbox"/> INCL <input type="checkbox"/> EXCL				EL DISEASE - EA EMPLOYEE \$
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

OCT 28 1996

CERTIFICATE HOLDER

State of New Mexico
Energy, Minerals & Natural
Resources Attn: R.J. Garcia
2040 So. Pacheco St
Santa Fe NM 87505

ZZZZZZZ

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE
EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL
10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT,
BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY
OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

E & S Brokerage Services, Inc.

ACORD 25-S (1/95)

ACORD CORPORATION 1488

00650 - Certificate of Insurance

The following sections describe additional articles under this contract.

00824 - Statutory Requirements

New Mexico Energy, Minerals and Natural Resources Department
CERTIFICATION REGARDING DRUG-FREE WORKPLACE

This certification is required by the Drug-Free Workplace Act of 1988 (Pub. L. 100-6900, Title V, Subtitle D) and is implemented through additions to the Department and Suspension regulations, published in the Federal Register on January 31, 1989

Robert Lopez (Contractor) certifies to the Energy, Minerals and Natural Resources Department (EMNRD) that it will provide a drug-free workplace by:

- A. Publishing a statement notifying employees that the unlawful manufacture, Distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- B. Establishing a drug-free awareness program to inform employees about:
 - 1. the dangers of drug abuse in the workplace;
 - 2. the Contractor's policy of maintaining a drug-free workplace;
 - 3. any available drug counseling, rehabilitation, and employee assistance programs;
 - 4. the penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- C. Making it a requirement that each employee to be engaged in the performance of the contract be given a copy of the statement required by paragraph A.;
- D. Notifying the employee in the statement required by paragraph A. That, as a condition of employment under the contract, the employees will:
 - 1. abide by the terms of the statement; and
 - 2. notify the employer of any criminal drug statute conviction for a violation occurring in the workplace not later than five (5) days after such conviction;

- E. Notifying EMNRD within ten (10) days after receiving notice under subparagraph D-2. from an employee or otherwise receiving actual notice of such conviction;
- F. Taking one of the following actions, within thirty (30) days of receiving notice under subparagraph D-2., with respect to any employees who is so convicted:
1. taking appropriate personnel action against such an employee, up to and including termination; or
 2. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- G. Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs A., B., C., D., E., and F.

Place of Performance: The applicant shall insert in the space provided below the site(s) for the performance of work done in connection with the specific contract (street address, city, county, state, zip code)

Flat Top Mine Safeguard Maintenance Project - EMNRD-MMD- 97-521.06-071
Cibola County
San Mateo, New Mexico 87050

An applicant who is and individual certifies that, as a condition of the contract, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conduction any activity with the contract.

This assurance is given in connection with any and all payments from the Energy, Minerals and Natural Resources Department after the date this form is sig'ne . This includes paymentsafter such date for contracts approved before such date. The Contractor recognizes and agrees that any such contract will be extended in reliance on the representations and agreements made in this assurance, and the United States shall have the right to seek judicial enforcement of this assurance.

This assurance is binding on the Contractor, its successors, transferrees, and assignees, and on the authorized official (or individual Contractor, as appropriate) whose signature appears below.

ROBERT LOPEZ	97-521.06-071
Organization Name	Contract Number
<u>Robert Lopez Owner</u>	
Name and Title of Authorized Representative	
<u>Robert Lopez</u>	<u>1-21-97</u>
Signature	Date

00900 - Addenda

APPLICATION FOR PAYMENT**FLAT TOP MAINTENANCE PROJECT**San Mateo, New Mexico

EMNRD-MMD- 97-521.06-071

Contract No. 96-6 Contractor _____ Billing No. _____ Billing Date _____ Terminate _____

Billing represents work completed through (date) _____

ITEM NO.	MATERIAL OR WORK DESCRIPTION REMAINING	ESTIMATED QUANTITY	CONTRACT	UNITS THIS AMOUNT	AMOUNTS THIS BILLING	UNITS PREVIOUS BILLING	AMOUNTS PREVIOUS BILLINGS	UNITS BILLINGS	AMOUNTS REMAINING
1.	Mobilization & Demolition (not to exceed 10% of total bid)	For the lump sum of	\$ 250.00						
2.	Mine Backfilling 400 cu. Yds.	For the lump sum of	\$ 2,500.00						
		Subtotal	\$ 2,750.00						
3.	GROSS RECEIPTS TAX = LOCAL RATE (5.75 % through 12-31-96) x Subtotal		\$ 158.12						
TOTAL CONTRACT			\$ 2,908.12						

CERTIFICATION

I do hereby certify that the work described herein has been performed and that no previous payment for the Total Amount Due this Statement, as shown above, has been received.

By: _____

Mining and Minerals Division Director

By: _____

Contractor

By: _____

AML Project Manager

Date: _____

Date: _____

Date: _____

State of New Mexico
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505-5472

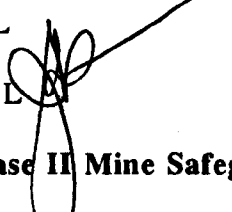
BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

June 7, 1993

MEMORANDUM

TO: Robert M. Evetts, Program Manager, AML

FROM: John A. Kretzmann, Project Engineer, AML 

SUBJECT: EMNRD-MMD-92-5 Grants Uranium Phase II Mine Safeguard Project - FINAL REPORT

The following is a final report for the Grants Uranium Phase II Mine Safeguard Project Number EMNRD-MMD-92-5, Ambrosia Lake, New Mexico (see Figures 1 and 2). This project consisted of the safeguarding of eleven abandoned uranium mine openings, demolition of three steel headframes and one timber loadout and closure of 967 boreholes, ranging from 4-inches to 18-inches in diameter (see Figures 3 through 14). Some boreholes, although originally drilled at these diameters, had partially collapsed, sometimes forming a bell-shaped void below the ground surface large enough for a person to fall into. Construction began on March 15, 1993.

The Barbara J mine shafts were closed using the Type 1 closure shown in Figure 11. Tested imported inert riprap and sand/gravel, bentonite chips and soil from the soil stockpile at the Piedra Triste mine closed in 1991 during the Grants Phase I project were used to close these shafts. All soil material for backfilling of the Barbara J shafts came from this soil stockpile. Chemical and radiological test results on the imported inert riprap (from the McCurdy pit) and crusher fines used for the sand/gravel layer supporting the bentonite layer are in the project files and indicate materials with tested parameters significantly below the threshold parameters specified. The Barbara J #2 shaft collapsed during placement of riprap and the bentonite plug could not be placed at specified. Instead an effort was made to break through any bridging by placement of more rock, and the final 87 feet filled with soil material. Bentonite plugs a minimum of two feet thick were placed at 56 feet below ground at the Barbara J#1 shaft, 174 feet down at the Barbara J #3 shaft and 48 feet down at the Barbara J #3-A ventilation shaft.

The steel headframes at the Barbara J #1 and #2 shafts were brought down and dismantled. By the end of the project the steel scrap had been completely hauled off by the local rancher and others. The rancher promised AML that he would use steel scrap only for outdoor construction.

The decline adits at the Flea and Beacon Hill Gossett mines were backfilled as specified. With AML approval, the contractor, Khani Co. of Albuquerque, substituted 30-mil PVC liners for the compacted impervious fill zones as shown in revised Figure 13. Similarly, with the substitution of 30- mil PVC liners for compacted impervious fill, the shafts at the East Malpais Lease and Beacon Hill #18-23 mines and the ventilation shafts at the Beacon Hill Gossett mines were closed using the Type 2 closure details shown in revised Figure 12. See the attached letter describing and showing the liner installation details.

Nowhere was it necessary for the contractor to borrow soil materials from an on-site pit and backfill it with mine waste material as shown in Figure 15. Survey caps were grouted in adjacent competent rock or concrete foundations or inside 3-inch diameter pipes as specified at backfilled shafts, ventilation shafts, and adits.

Specified and additional radiation protection procedures were followed to protect workmen and personnel during construction. Additional measures included the wearing of plastic booties and jump suits while working. The radiation exposure results from the TLD badges worn on site are in the project files and indicate a maximum exposure during the project of 26 mrem.

Numerous boreholes (627 on Mesa Montañosa and 340 in Poison Canyon) were closed around the backfilled mine features. Most of the boreholes, except the most shallow, on Mesa Montañosa were closed by placement of permanent cement bridges as shown in Figure 14. In Poison Canyon boreholes over 150 feet deep were closed with permanent cement bridges and bentonite plugs as shown in the same figure. Shallower boreholes in the canyon were completely filled with granular on-site soil material as specified. A summary of the borehole closures is in our permanent files.

During construction, two shafts were discovered that had opened to the surface in the area impacted by the previous phase of this project. These shafts are located southeast of the soil stockpile established in 1991 at the closed Piedra Triste Mine during construction of the Grants Uranium Phase I mine safeguard project. Both shafts were extremely dangerous to the public at large. One shaft measured about 10 feet by 12 feet by 78 feet deep and the other 23 feet by 27 feet by 17 feet deep (with a dead calf found at the bottom). These shafts were closed under a small construction project using maintenance funds.

All disturbed areas, including mounds at shafts and adits and temporary construction haul roads were seeded, fertilized and mulched as specified in the last week of April 1993. All work was completed by May 3, 1993.

JAK:jak

Attachments

original: Post Construction (j) w/ attachments

xc: Raymond Rodarte, Project Manager, w/ copy of attachments
Homer Milford, Environmental Coordinator

ROAD MAP OF NEW MEXICO



NEW MEXICO
Abandoned Mine Lands

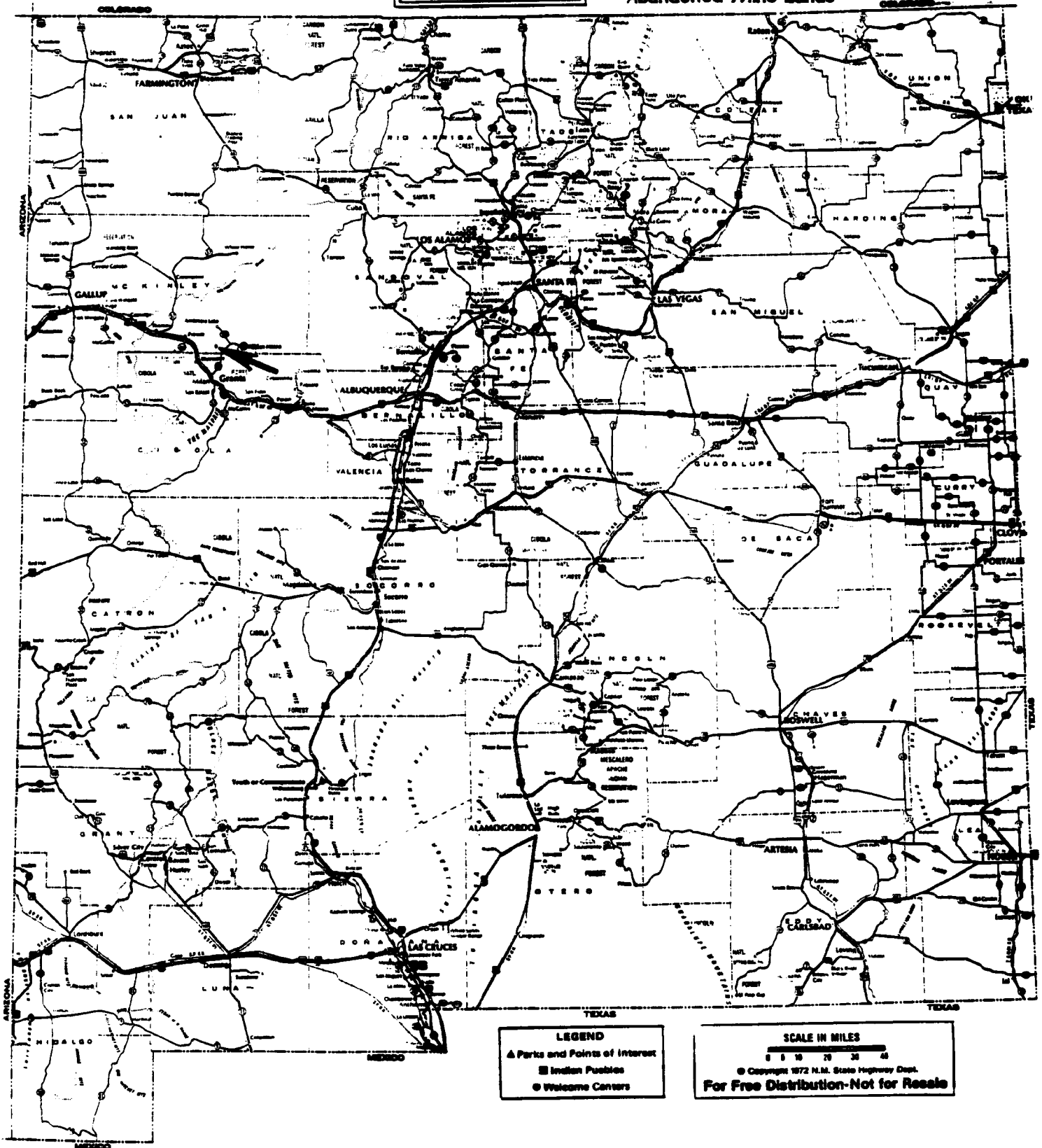
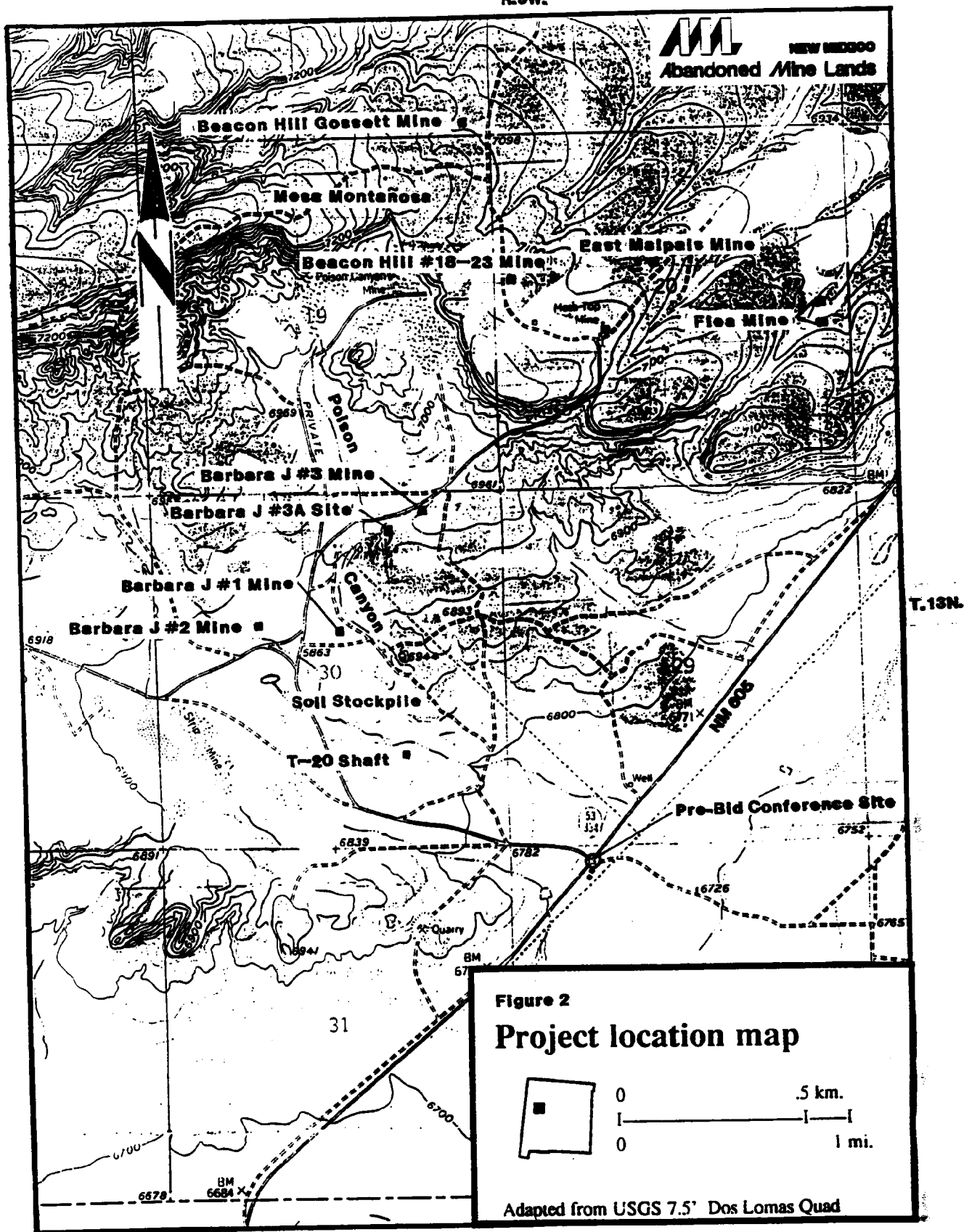


FIGURE 1.

R.9W.



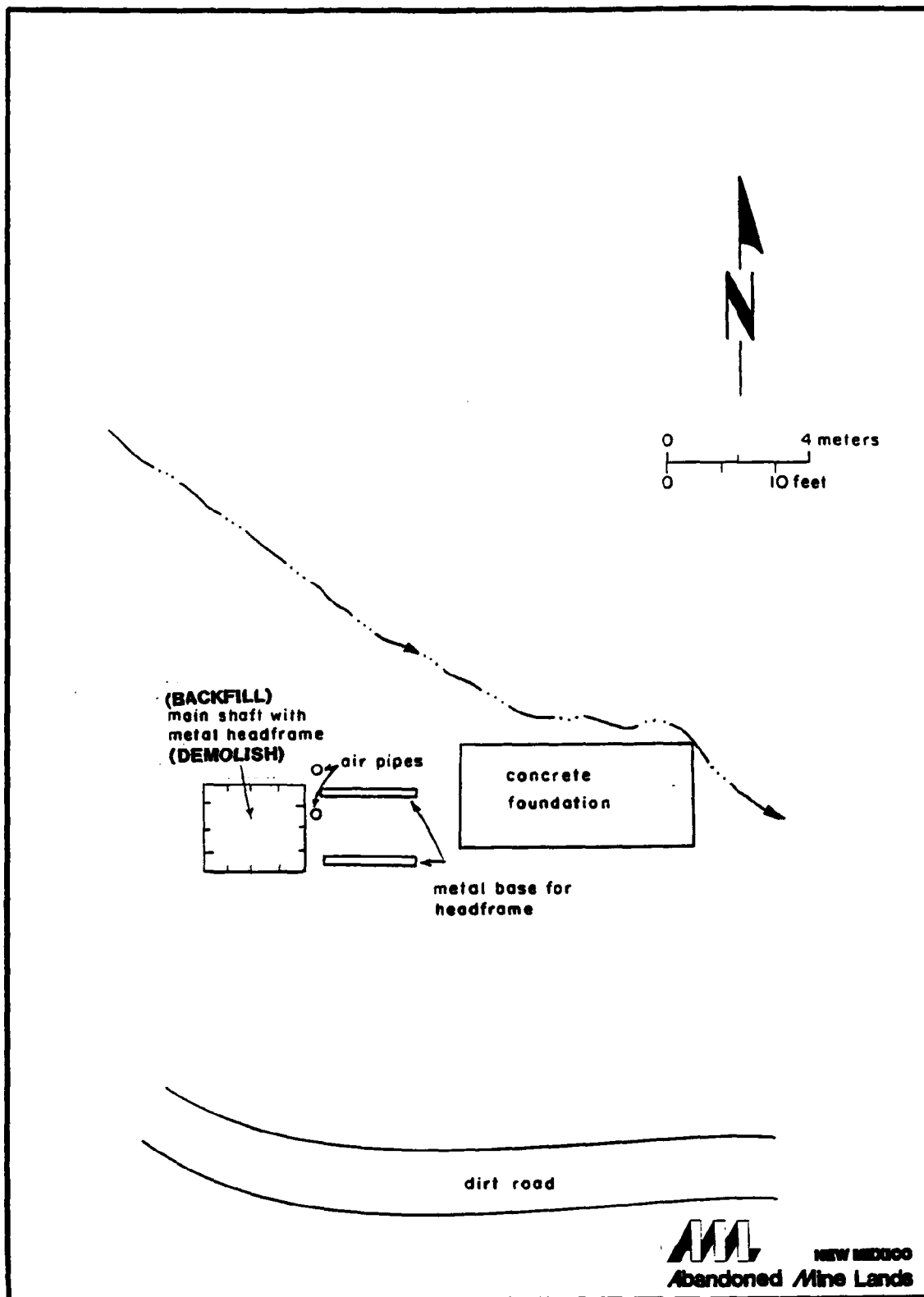


Figure 3. Site map, Barbara J #1.

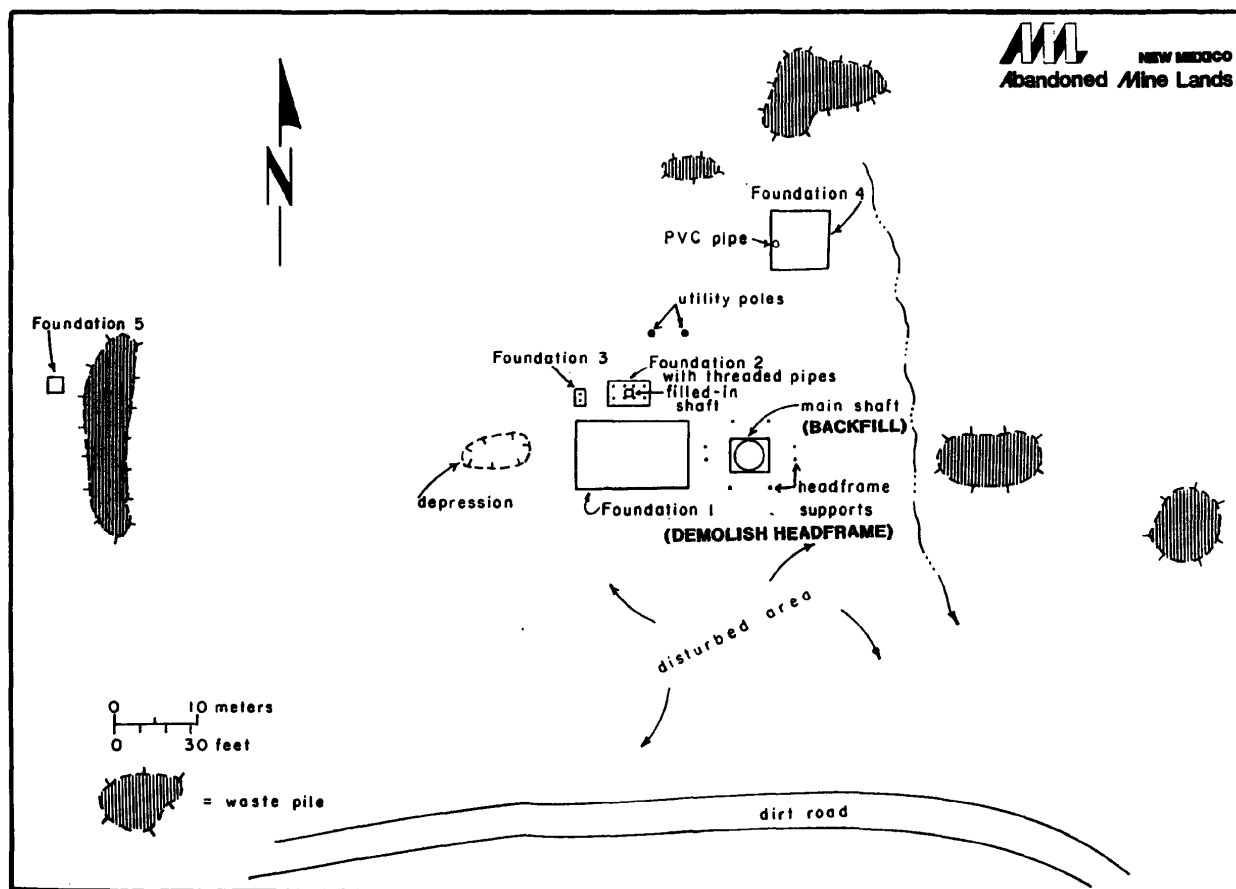


Figure 4. Site map, Barbara J #2.

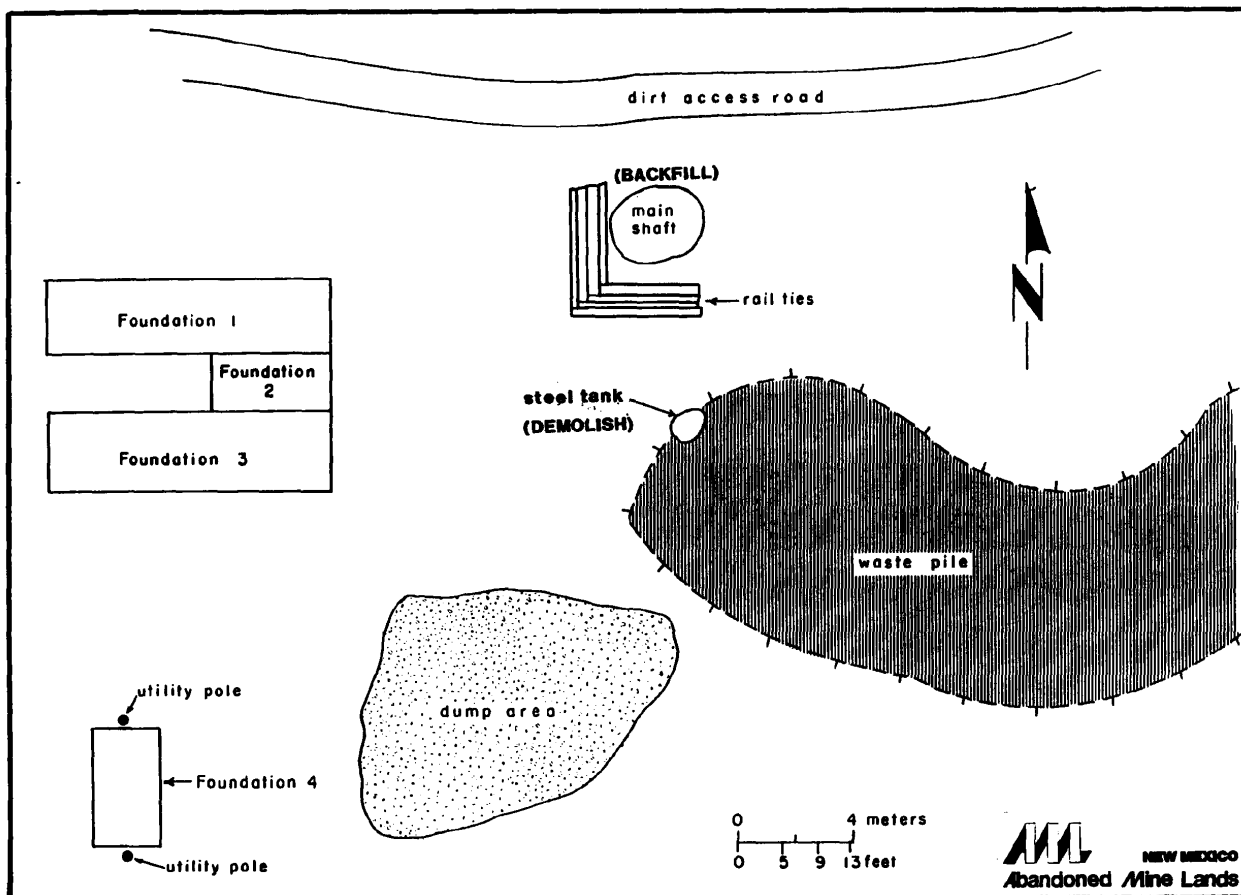


Figure 5. Site Map, Barbara J #3.

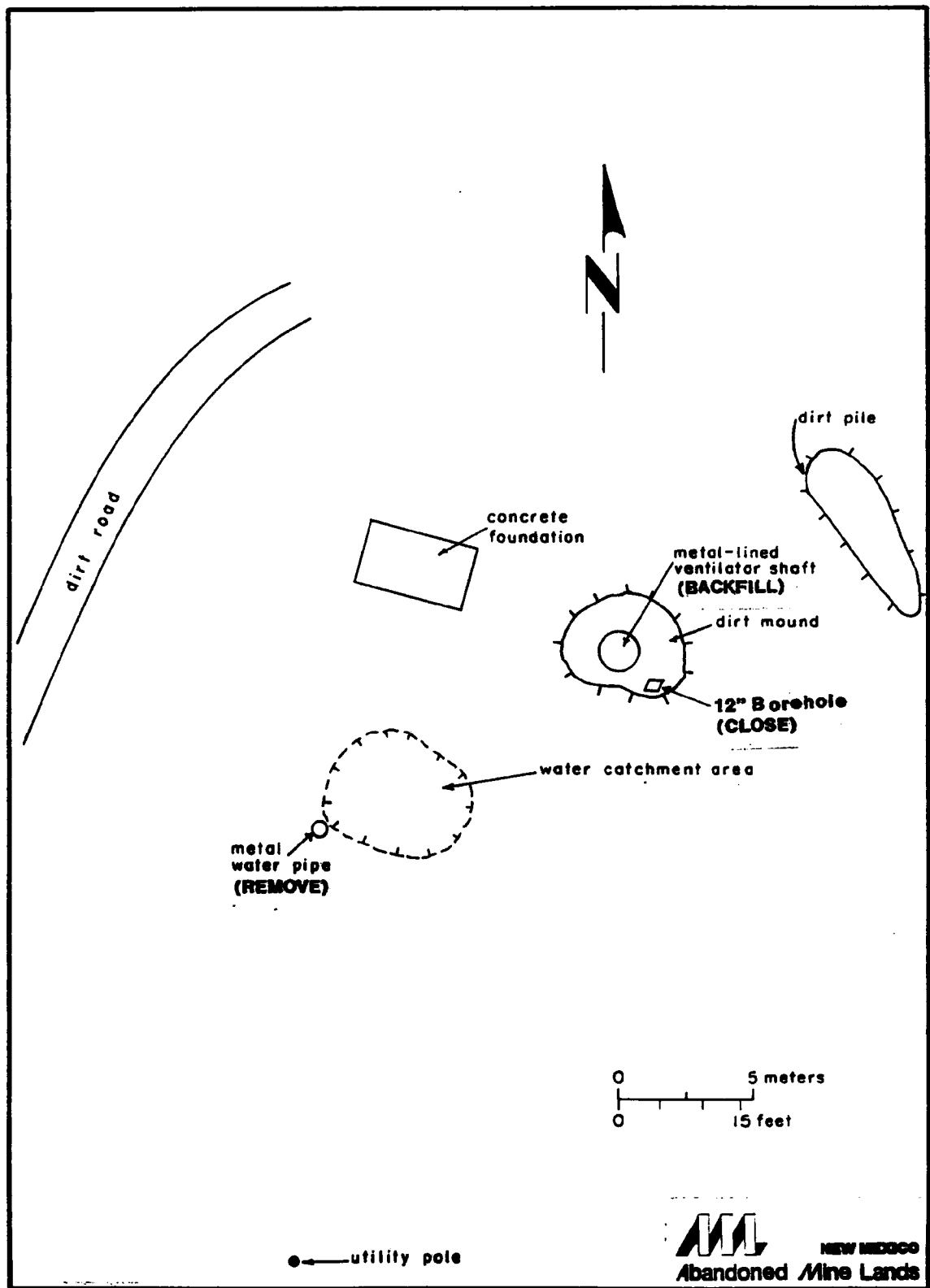


Figure 6.3 . Main shaft and ventilation shaft, Barbara J #3-A

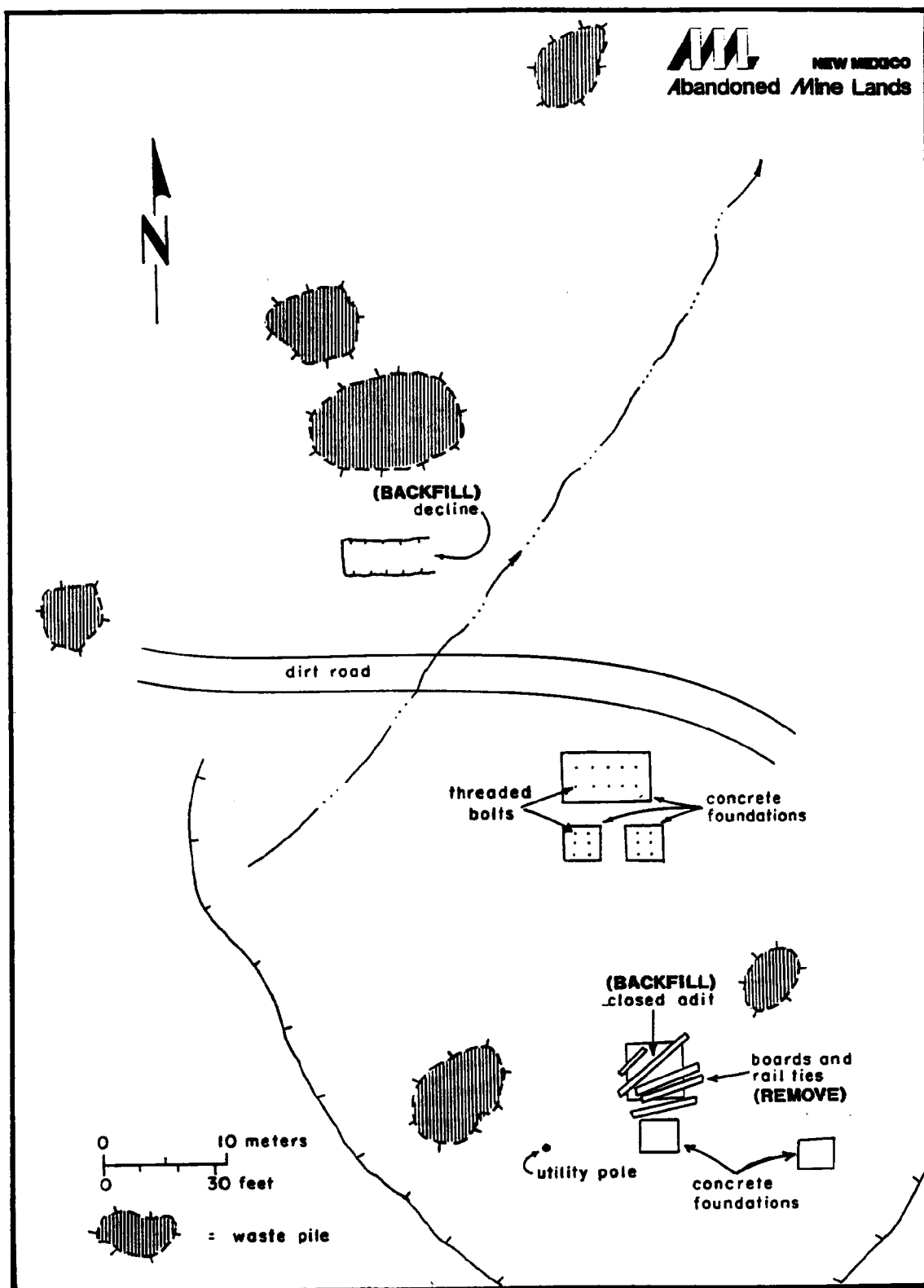


Figure 7. Site map, Flea Mine.

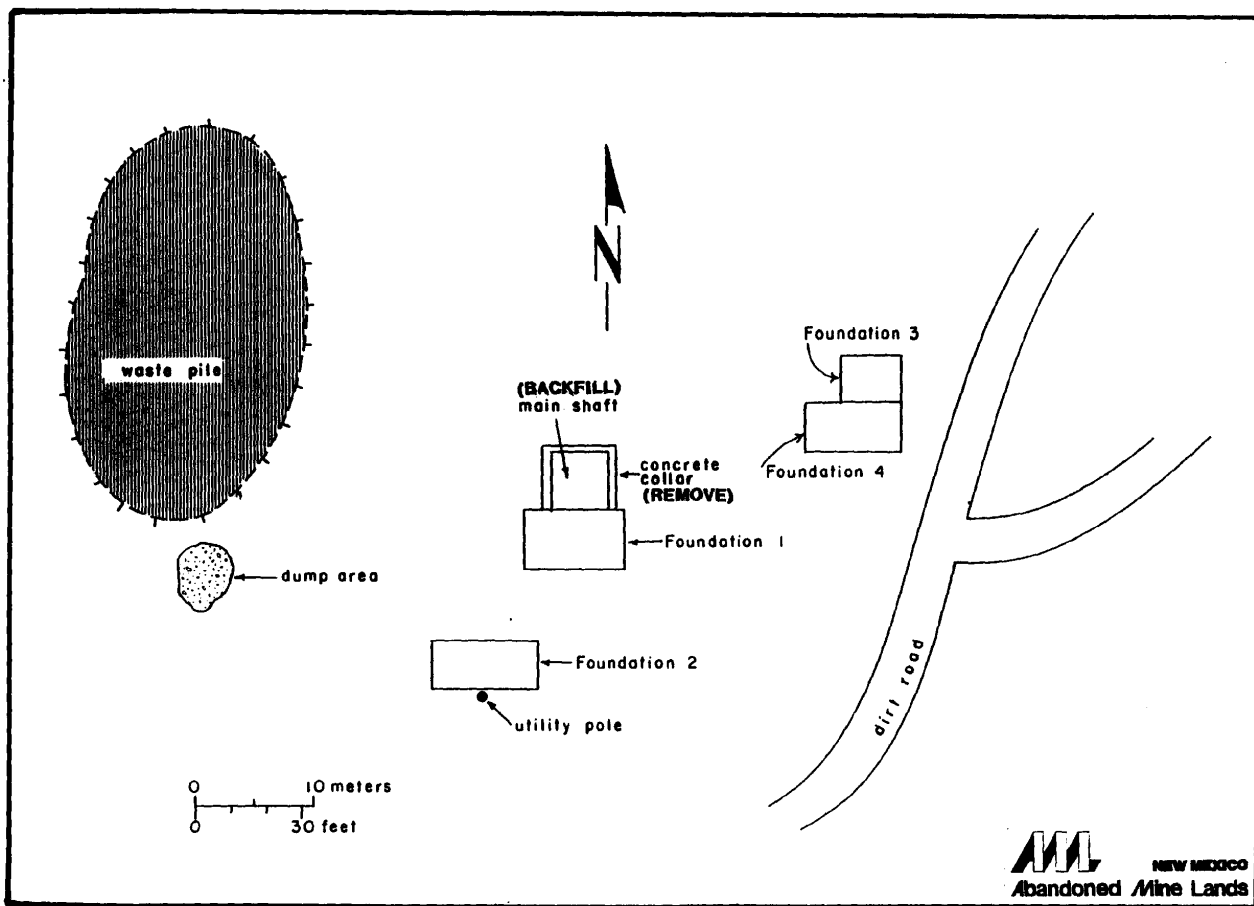


Figure 8. Site map, East Malpais Lease.

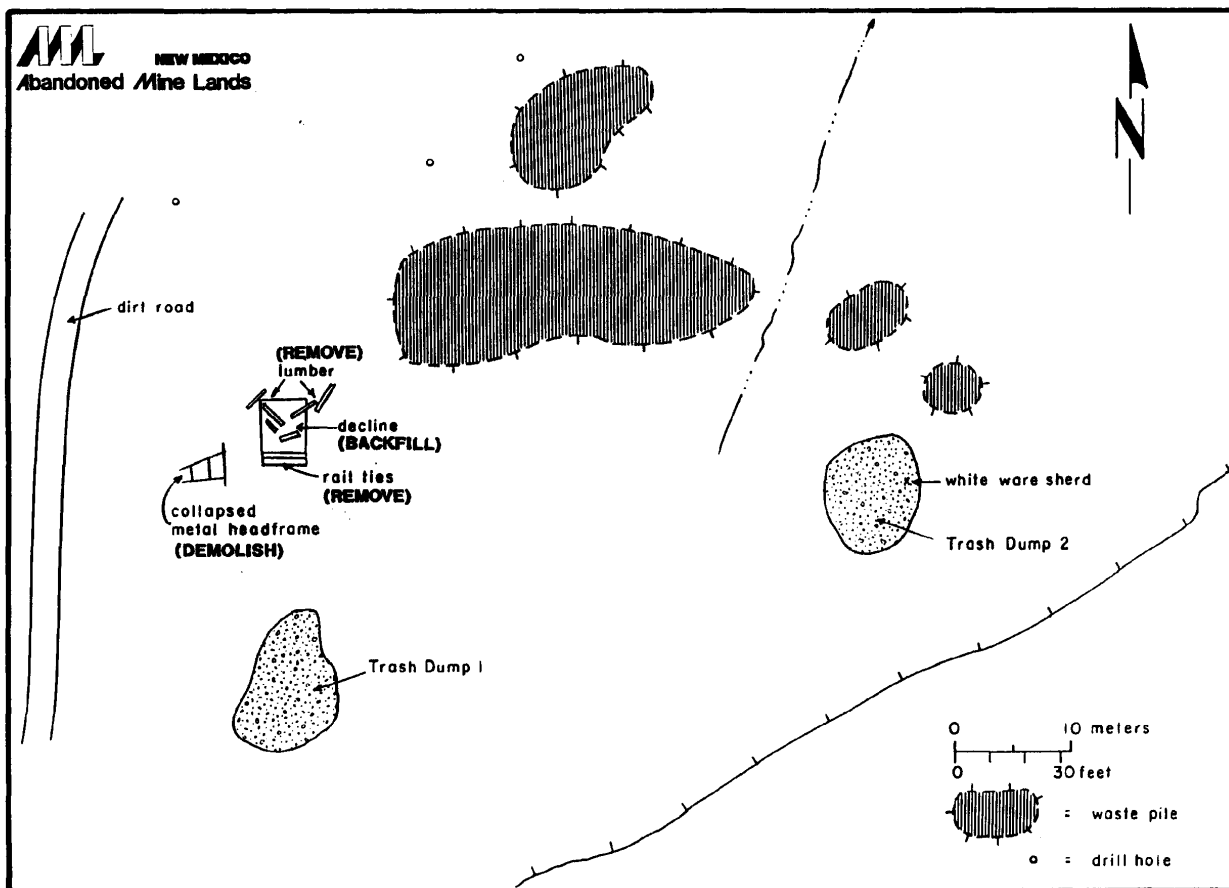


Figure 9. Site map, Beacon Hill #18-23.

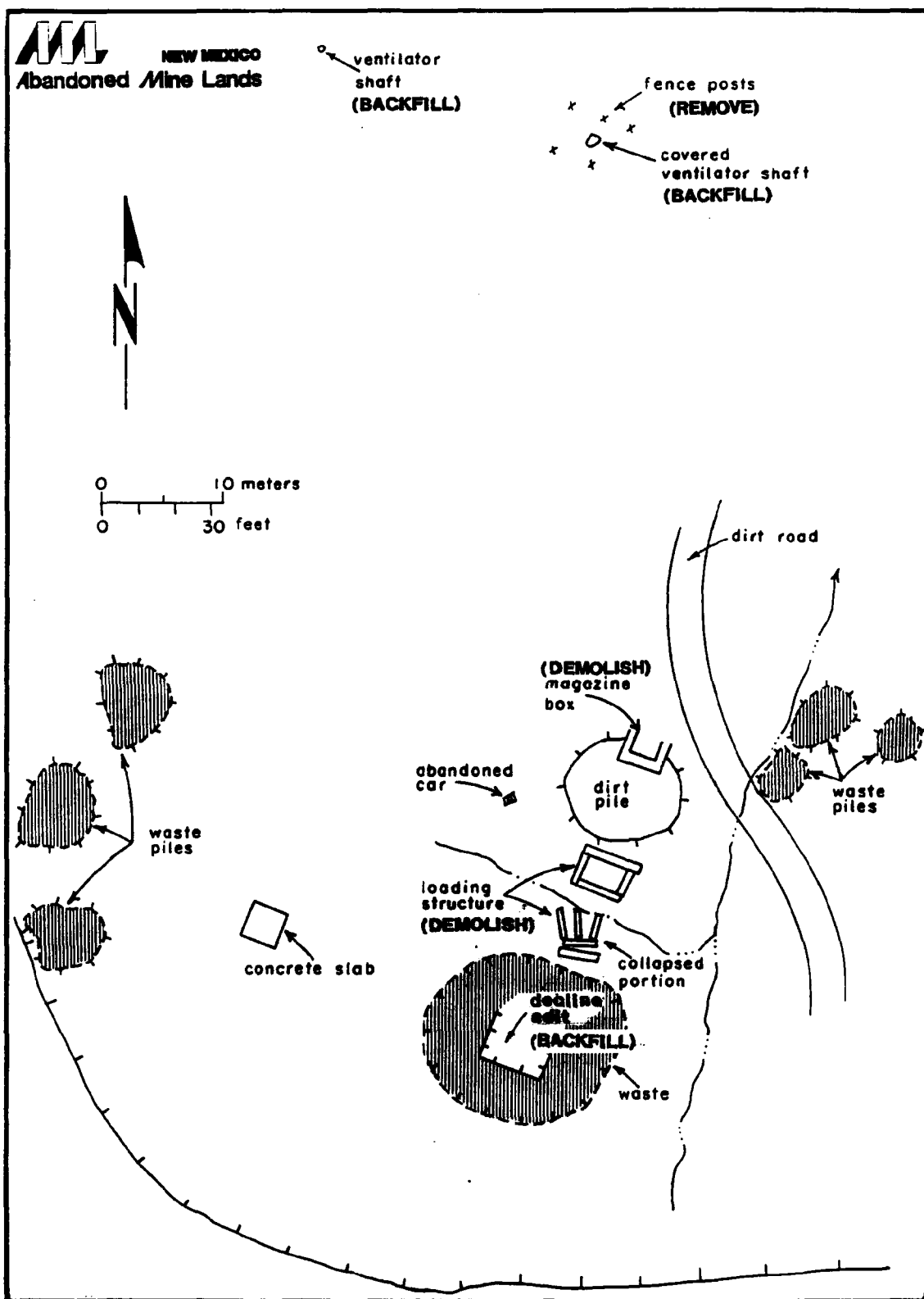


Figure 10. Site map, Beacon Hill Gossett Mine.

